



# Tamil Nadu Veterinary and Animal Sciences University



**QUESTION BANK**  
*for*  
**Competitive Examinations**  
**(VETERINARY AND ANIMAL SCIENCES)**

**Compiled by**

**Dr. A. MANIVANNAN**  
**Dr. P. VISHA**  
**Dr. M. DHANALAKSHMI**  
**Dr. A. ELAMARAN**  
**Dr. B. KARTHIK**  
**Dr. T. SIVAKUMAR**

**Education Cell**

**Veterinary College and Research Institute**  
**Orathanadu – 614 625, Thanjavur District**

**2020**



**TAMIL NADU VETERINARY AND ANIMAL SCIENCES UNIVERSITY**  
Veterinary College and Research Institute,  
Orathanadu, Thanjavur - 614 625.



**Dr. T. Sivakumar, M.V.Sc., M.Sc.(UK), Ph.D., PGDET, FNAPM**  
Dean

Date : 07.02.2020

## FOREWORD

Tamil Nadu Veterinary and Animal Sciences University (TANUVAS) is recognized as an Institute Of Excellence for Veterinary and Animal Sciences in South Asia owing to its credible contributions in Education, Research and Extension.

Veterinary College and Research Institute, Orathanadu, a constituent college of TANUVAS contributes to the growth of the livestock and poultry sector by carrying out several Animal Husbandry and Veterinary Services for the upliftment of livestock and farmers of Cauvery delta region of Tamilnadu.

In the Education arena, our college staff are creating various educational resources to serve a ready reference for veterinary graduates and the students who are striving hard for competitive examinations viz. Tamilnadu Public Service Commission (TNPSC), Union Public Services Commission (UPSC), ICAR Exams. All these resources are of high standards that made our students to score highest ranks in All India Post Graduate Entrance Examinations.

In continuation of this, the faculty of VCRI Orathanadu, TANUVAS have come out with a comprehensive book on Multiple Choice Questions in Veterinary and Animal Sciences as per the new TNPSC syllabus. The questions in this book are critically framed to give a broad overview and insight of the various veterinary subjects.

I whole heartedly congratulate our staff for their tremendous efforts in preparing and compiling this book, which is the need of the hour in Tamilnadu.

*All the best..!*

(T.Sivakumar)  
Dean  
VCRI, Orathanadu

Phone : +91 - 4372 - 234011 (Dir.) | Epabx : +91 - 4372 - 234012 / 13 / 14 / 16 | Fax : +91 - 4372 - 234022  
Mob : +91 - 98415 98614 | Email : deanvcrid@tanuvas.org.in | tsk63@rediffmail.com  
Website : www.tanuvas.ac.in

Sl. no.	Contents	Page No.
1.	<b>Animal Genetics and Breeding</b> Dr. P. Vijayakumar, Assistant Professor, LFC	04 – 17
2.	<b>Veterinary and Animal Husbandry Extension Education</b> Dr.K.P.Saravanan, Assistant Professor, VAE and Dr.V.Sasikala, Assistant Professor, VAE	18 – 28
3.	<b>Animal Nutrition</b> Dr.K.Ayyappan, Assistant Professor, ANN and Dr.M.Palanivel. Assistant Professor, ANN	29 – 42
4.	<b>Veterinary Clinical Medicine</b> Dr. M. Saravanan, Assistant Professor, VCC	43 – 49
5.	<b>Livestock Production Management</b> Dr.A.Clement Ebenezer Henry, Assistant Professor, LPM	50 – 60
6.	<b>Livestock Products Technology (Dairy Science)</b> Dr.G.Rajarajan, Assistant Professor, LPT	61 – 71
7.	<b>Livestock Products Technology (Meat Science)</b> Dr.R.Ilavarasan, Assistant Professor, LPT	72 – 83
8.	<b>Veterinary Preventive Medicine</b> Dr. K. Jayalakshmi, Assistant Professor, VMD	84 – 88
9.	<b>Veterinary Anatomy</b> Dr.S.Paramasivam, Professor and Head, VAN and Dr.S.Sivagnanam, Assistant Professor, VAN	89 – 131
10.	<b>Veterinary Biochemistry</b> Dr.S.Murugavel, Assistant Professor, VPB	132 – 141
11.	<b>Veterinary Obstetrics and Gynaecology</b> Dr.V.Prabakaran, Assistant Professor, VOG and Dr.R.Rajkumar, Assistant Professor, VOG	142 – 178
12.	<b>Veterinary Microbiology</b> Dr.B.Puvarajan, Associate Professor, VMC and Dr.R.Manickam, Assistant Professor, VMC	179 – 188
13.	<b>Veterinary Parasitology</b> Dr.A.Latchumikanthan, Assistant Professor, VPA and Dr.M.K.Vijayarathy, Assistant Professor, VPA	189 – 203
14.	<b>Veterinary Pathology</b> Dr.R.Ravikumar, Assistant Professor, VPP & Dr.P.C.Prabhu, Assistant Professor, VPP and Dr.K.Thilagavathi, Assistant Professor, VPP	204 – 213
15.	<b>Veterinary Pharmacology and Toxicology</b> Dr.P.Senthilkumar, Assistant Professor, VPT	214 – 228
16.	<b>Veterinary Physiology</b> Dr.P.Visha, Associate Professor and Head, VPB	229 – 238
17.	<b>Veterinary Surgery and Radiology</b> Dr.S.Senthil Kumar, Associate Professor and Head, VCC & Dr.A.Kumaresan, Assistant Professor and Head, VSR & Dr.P.Tamilmahan, Assistant Professor, VSR	239 – 247

**ANIMAL GENETICS AND BREEDING**

1. All Tamil Nadu cattle breeds are \_\_\_\_\_
  - a. Milch breeds
  - b. Draught breeds
  - c. Dual purpose
  - d. None of the above
2. \_\_\_\_\_ cattle breed is suitable for ploughing in marshy paddy fields
  - a. Bargur
  - b. Umblachery
  - c. Kangayam
  - d. Pullikulam
3. Recently recognized sheep breeds of Tamil Nadu
  - a. Katchaikatty Black
  - b. Chevvalu
  - c. Both a & b
  - d. Vembur
4. Recently recognized Goat breeds of Tamil Nadu
  - a. Trichy Black
  - b. Salem Black
  - c. Chevvalu
  - d. Bargur
5. Recently recognized buffalo breed of Tamil Nadu
  - a. Bargur
  - b. Salem Black
  - c. Todad. Katchaikatty Black
6. \_\_\_\_\_ cattle breed known for its unsurpassed in speed and endurance in trotting in hilly region
  - a. Bargur
  - b. Umblachery
  - c. Kangayam
  - d. Pullikulam
7. \_\_\_\_\_ is the nodal agency for the registration of newly identified germplasm of livestock and poultry.
  - a. ICAR- IVRI
  - b. ICAR- NDRI
  - c. ICAR- NBAGR
  - d. ICAR- CIRC
8. Pea comb is common in which class of poultry
  - a) American
  - b) English
  - c) Asiatic
  - d) Mediterranean
9. Failure to response to selection is called
  - a. Selection limit
  - b. Asymmetry of response
  - c. Selection differential
  - d. Selection intensity
10. The genetic improvement of well known breed can be achieved by \_\_\_\_\_
  - a. Selecting breeding
  - b. Grading-up
  - c. Inbreeding
  - d. Line breeding
11. The offspring are better than the mean of both parents is called as \_\_\_\_\_
  - a. Positive heterosis
  - b. Negative Heterosis
  - c. Hybrid Vigour
  - d. Both a and c



22. Barred plumage in poultry, broodiness in poultry, rapid feathering & slow feathering in poultry, cryptorchidism in horses and white eye in drosophila are examples of \_\_\_\_\_
- a. Sex-linked inheritance
  - b. Sex-influenced inheritance
  - c. Sex-limited inheritance
  - d. None
23. Auto sexing on the basis of \_\_\_\_\_ sex-linked traits of chicken
- a. Barred plumage
  - b. Fast & slow feathering
  - c. Both a and b
  - d. None
24. Milk yield and draught capacity of cattle has a \_\_\_\_\_ correlation
- a. Negatively correlation
  - b. Nonsense correlation
  - c. Positively correlation
  - d. None of the above
25. The ratio of selection differential to the phenotypic standard deviation of a trait is known as \_\_\_\_\_
- a. Intensity of selection
  - b. Response to selection
  - c. Accuracy of selection
  - d. Limit of selection
26. Genes of sex-limited traits are present on \_\_\_\_\_
- a. Sex-chromosomes
  - b. Autosomes
  - c. Both
  - d. None
27. The increasing order of efficiency of methods of selection is
- a. Tandem selection < Independent culling < Selection index
  - b. Tandem selection < Selection index < Independent culling
  - c. Independent culling < Selection index < Tandem selection
  - d. Independent culling < Tandem selection < Selection index
28. Which is true about individual selection
- a. Animals are selected on the basis of their own phenotype
  - b. It is most accurate basis of selection and gives direct estimate of breeding value
  - c. Generation interval is shortest among all the basis of selection
  - d. All of the above
29. Individual selection and pedigree selection are more effective when heritability of trait is
- a. High
  - b. Low
  - c. Medium
  - d. None

30. Progeny testing and family selection are more effective when the trait is
- Sex limited traits
  - Low heritable traits
  - Carcass traits
  - All of the above
31. Most effective aids to selection for improving sex-limited trait is \_\_\_\_\_
- Progeny testing
  - Sib selection
  - Family selection
  - Individual selection
32. Which of the following is true about repeatability of a trait \_\_\_\_\_
- It is used to predict future performance from past records
  - It is used to predict MPPA and used in making culling decisions of cows
  - It is the upper limit of heritability in broad sense
  - All the above
33. The ratio of response to selection to the selection differential is termed as - .
- Regression
  - Realized heritability
  - Heritability in broad sense
  - Heritability in narrow sense
34. The unit of selection in family selection is
- Family mean
  - Pedigree information
  - Individual mean
  - Within family mean
35. Genetic gain per year is depend upon
- Heritability
  - Calving interval
  - Generation interval
  - Repeatability
36. "Resemblance between relatives" is the basis of estimation of
- Heritability
  - Repeatability
  - Genetic Correlation
  - Regression
37. Repeatability is generally estimated by
- Half-sib correlation
  - Intra-class correlation
  - Regression
  - BLUP
38. Heterosis, inbreeding depression and specific combining ability (SCA) are caused by \_\_\_\_\_
- Non-additive gene action (Dominance + Over-dominance + Epistasis)
  - Additive gene action
  - Both a & b

- d. None of the above
39. General combining ability, Complementarity, breeding value & resemblance between relative is due to \_\_\_\_\_
- Non-additive gene action (Dominance + Over-dominance + Epistasis)
  - Additive gene action
  - Both a & b
  - None of the above
40. Reciprocal recurrent selection (RRS) is more suitable for poultry and swine selection programme to improve
- GCA
  - SCA
  - Both
  - None
41. \_\_\_\_\_ is used for the production of commercial broilers.
- Crossbreeding
  - Line crossing
  - Strain crossing
  - Selective breeding
42. What are the assumptions of Hardy-Weinberg equilibrium- .
- Small population, random mating, absence of mutation, migration & selection
  - Large size population, random mating, absence of mutation, migration & selection
  - Large size population, random mating, presence of mutation, migration & selection
  - None the above
43. Inbreeding coefficient of progenies produced by grandparent – offspring mating, half sib mating & double first cousin mating are
- 0.25
  - 0.50
  - 0.125
  - 0.0625
44. Genetic correlation between traits is due to
- Pleiotropy
  - Linkage
  - Heterozygosity
  - All the above
45. The proportionate contribution of offspring to the next generation is known as
- Fitness
  - Adaptive value
  - Selective value
  - All the above
46. Number of barr-body in turner syndrome
- 0
  - 1
  - 2
  - 3



47. Which of the following pair is not correctly matched
- a. Turner syndrome:  $44 + X0$
  - b. Klinefelter syndrome:  $44 + XXY$
  - c. Down syndrome: Trisomy 21
  - d. Cat cry syndrome: Trisomy 5
48. Which of the following is correct about genetic code
- a. It includes 61 codons for Amino acids & 3 stop codons
  - b. Triplet nature for codon, some amino acids are coded by multiple codons
  - c. Almost universal; starting codon is AUG; AUG code for methionine amino acid
  - d. All the above
49. Which of the following is true about inter-se mating
- a. Crossing of crossbred progeny having same level of inheritance
  - b. It is the mating of crossbred progeny among themselves ( $F1 \times F1$ )
  - c. It maintain the same level of inheritance
  - d. All the above
50. Milk yield and fat yield in dairy animals, egg size & egg weight in poultry are \_\_\_\_\_ traits
- a. Positively correlated
  - b. Negatively correlated
  - c. No correlation
  - d. None
51. Which of the following is/are example(s) of complete linkage
- a. Male drosophila
  - b. Female silk moth & female poultry
  - c. Sex chromosomes of all heterogametic species
  - d. All the above
52. Criss-cross pattern of inheritance is seen in
- a. Sex – linked traits
  - b. Sex – limited traits
  - c. Sex – influenced traits
  - d. None of the above
53. Which of the following is/are true about heritability
- a. It is the regression of breeding value on phenotypic value in narrow sense
  - b. It is the ratio of genotypic variance to phenotypic variance in broad sense
  - c. It is fraction of parent superiority which is transmitted to the offspring
  - d. All the above

54. Mean deviation of progeny from its population mean is known as
- a. Transmitting ability or Average effect
  - b) Breeding value
  - c. Adaptive value
  - d. None of the above
55. Breeding value of an animal can be described as- .
- a. It is the sum of average effect of the genes carried by an individual
  - b. It is twice the mean deviation of the progeny from the population mean or twice of transmitting ability
  - c. It is the value of individual judged by mean value of its progeny
  - d. All are correct
56. Phenotype is a good indicator of genotype when the heritability of a trait is
- a. High
  - b. Low
  - c. Medium
  - d. Zero
57. Most of the economic traits are
- a. Controlled by many genes (polygenes) and greatly influenced by environment
  - b. Shows continuous variation
  - c. The effect of a gene is small and cumulative in nature
  - d. All of the above
58. The best method of sire evaluation is
- a. Best Linear Unbiased Prediction (BLUP)
  - b. Best Linear Unbiased Estimator (BLUE)
  - c. Equi-parent index
  - d. Contemporary index
59. Which of the following is/are disadvantage(s) of inbreeding
- a. Frequency of undesirable recessive genes is increased
  - b. It causes inbreeding depression
  - c. Inbred animals are more prone to environmental changes
  - d. All the above
60. Ability of an individual to stamp its characters on its progeny is known as
- a. Prepotency
  - b. Penetrance
  - c. Expressivity
  - d. Panmixia
61. Best method of heritability estimation which is relatively free from biases is
- a. Half sibs correlation method
  - b. Full sibs correlation method
  - c. Intra – sire regression
  - d. Dam – daughter regression

62. Progeny testing is used to select
- a. Parent                      b. Progeny                      c. Full sib                      d. Half sib
63. The ultimate source of all genetic variation of population is due to
- a. Chromosome segregation                      b. Crossing over  
c. Mutation, Migration, Selection, Genetic drift                      d. All the above
64. Which is true about random genetic drift or 'Sewall Wright effect' in a population is
- a. It is a dispersive force to change gene frequency  
b. Random fluctuation in gene frequency from one generation to next generation  
c. It is only predicted in amount, not in direction and operates in small population  
d. All the above
65. Which trait show greatest inbreeding depression-
- a. Carcass quality                      b. Reproductive and fitness traits  
c. Trait related to viability                      d) Both b & c
66. Which of the following pair is/are correctly matched
- a. Exon: Coding sequence                      b. Intron: Non-coding sequence  
c. Highly heritable trait: Low heterosis                      d) All the above
67. If recombination frequency is 0.5 then it is
- a. Complete linkage                      b. Incomplete linkage  
c. No linkage                      d. All the above
68. Which of the following statement(s) is/are true about nucleus breeding schemes
- a. CNBS is mainly used in pig & poultry but ONBS is used in cattle, buffalo & sheep  
b. Increase genetic progress & reduced rate of inbreeding is observed in ONBS  
c. CNBS is one directional gene flow and ONBS is bidirectional gene flow  
d. All of the above
69. In case of inbreeding, heritability tends to
- a. Decline                      b. Increase                      c. Both                      d. None
70. Breeding policy adopted for increasing milk production of non-descript cattle is
- a. Inbreeding   b. Crossbreeding                      c. Grading up   d. Line breeding

71. Toda and Burgur buffalo breeds of Tamil Nadu can be best improved by
- Selective breeding
  - Crossbreeding
  - Grading up
  - Inbreeding
72. Inbreeding is used for commercial production of inbred lines in
- Cattle & buffalo
  - Pig & poultry
  - Pig & buffalo
  - Poultry & cattle
73. Selection intensity is higher when
- Fewer animals are selected
  - Large no. of animals are selected
  - Both a and b
  - None
74. Crossing of two or more lines in all possible combinations is known as
- Diallele cross
  - Out – crossing
  - Criss – cross
  - Top – crossing
75. Maintenance of hybrid vigour in a cattle herd is done by
- Grading up
  - Inbreeding
  - Top crossing
  - Rotational crossing
76. Breeding policy adopted for buffalo improvement in Tamil Nadu
- Grading up
  - Selective breeding
  - Both a & b
  - Crossbreeding
77. Which of the following is a part of National Cattle Breeding Policy in India
- Grading up
  - Crossbreeding
  - Selective breeding
  - All the above
78. Heritability is the property of
- Population
  - Trait
  - Environment
  - All the above
79. Which of the following statement is true about multiple allelism
- More than two alternative form of a gene located on the same locus of the homologous chromosome
  - Multiple alleles are produced by mutation
  - Multiple alleles are found in the population, not in the single individual.
  - All are true
80. *Ex-situ* conservation means
- Organized herd outside breeding tract e.g. Research station, Zoo etc.

- b. Cryopreservation of sperms, oocytes, embryos, somatic cells, stem cells etc.  
c. Storage of DNA & live tissue  
d. All the above
81. The percentage of individuals with a given genotype that expresses the expected phenotype is known as  
a. Epistasis  
b. Expressivity  
c) Penetrance  
d. Recessive
82. Progeny testing is used for the selection of  
a. Dam  
b. Sire  
c. Son  
d. Daughter
83. Chromosome numbers in water buffalo (*Bubalus bubalis*) is  
a. 60  
b. 50  
c. 48  
d. 54
84. Inheritance of X-linked character is through  
a. Male parent  
b. Female parent  
c. Both a & b  
d. None
85. Genotypic frequency of offspring will depend upon  
a. Gene frequencies of parents  
b. Genotypic frequencies of parents  
c. Both Gene and Genotypic frequencies of parents  
d. None of the above
86. In Hardy Weinberg equilibrium, genotypic frequency of heterozygote will be highest when gene frequency of one gene is  
a. 0.60  
b. 0.40  
c. 0.50  
d. 0.9
87. Type of cross breeding which exploits 100% maternal, paternal as well as individual heterosis  
a. Four breed crosses  
b) Double two breed crosses  
c. Rotational crossing  
d. Both a & b
88. Outcrossing within a herd by use of selected sires  
a. Top crossing  
b. Selective breeding  
c. inter se mating  
d. Grading up
89. The primary spermatocyte contains  
a. '2n' number of chromosome  
b. 'n' number of chromosome

- c. '4n' number of chromosome  
chromosome
- d. '3n' number of  
chromosome
90. The diagrammatic representation of the chromosomes of an individual is called
- a. Idiogram  
b. Karyotype  
c. Both a & b  
d. None of the above
91. \_\_\_\_\_ is morphological representation of somatic chromosomes of an individual in descending order.
- a. Idiogram  
b. Karyotype  
c. Both a & b  
d. None of the above
92. Karyotype are made using
- a. Early prophase chromosome  
b. Metaphase chromosome  
c. Anaphase chromosome  
d. Telophase chromosome
93. Inbreed tester line is necessary in
- a. Recurrent selection  
b. Reciprocal recurrent selection  
c. Diallel crossing  
d. Partial diallel crossing
94. Most prolific Indian goat breed is
- a. Malabari  
b. Kanniadu  
c. Jamnapari  
d. Black Bengal
95. The two strands of DNA double helix are
- a. Coaxial  
b. Perpendicular to each other  
c. Complementary to each other  
d. Identical each other
96. A chromosomal aberration that affects the fertility of daughter is
- a. Robertsonian translocation  
b. Addition  
c. Random union of chromosome  
d. Deletion
97. Lactation length in cattle is standardized to
- a. 300 days basis  
b. 305 days basis  
c. 365 days basis  
d. 330 days basis
98. DNA synthesis occurs in
- a. 3' ---->5' direction  
b. 5' ---->3' direction  
c. Both  
d. None of the above

99. Rotational crossing is favoured in  
 a. Swine                      b. Horse                      c. Chicken                      d. Camel
100. Systemic process which tend to alter the gene frequency  
 a. Selection                      b. Migration                      c. Mutation                      d. All of the above
101. \_\_\_\_\_ gives the probability that two genes are identical by descent  
 a. Coefficient of relationship coefficient                      b. Inbreeding  
 c. Both                      d. None of the above
102. An inbred line has a minimum inbreeding coefficient of  
 a. 0.25                      b. 0.375                      c. 0.5                      d. 0
103. Superiority of selected parents over the population is  
 a. Response to selection                      b. Selection differential  
 c. Intensity of selection                      d. Accuracy of selection
104. Standardized selection differential is called as  
 a. Response to selection                      b. Selection intensity  
 c. Generation interval                      d. Accuracy of selection
105. Traits which show discrete variation but which is influenced by many pairs of genes is known as  
 a. Sex limited traits                      b. Qualitative traits  
 c. Quantitative traits                      d. Threshold traits
106. Commercial layer chicks are evolved out of  
 a. Two way crossing                      b. Criss crossing  
 c. Three way crossing                      d. Four way double crossing
107. The wall eyed buffalo breed  
 a. Bhadawari                      b. Nili-Ravi                      c. Murrah                      d. Toda
108. Appearance of ancestral traits after some generation is known as  
 a. Mutation                      b. Atavism                      c. Suppression                      d. None of the above
109. Exchange of parts between non-homologous chromosome is known as  
 a. Crossing over                      b. Linkage                      c. Translocation                      d. Reversion

110. The word 'gene', 'genotype' and 'phenotype' was coined by  
a. William Batson  
b. W.L. Johansen  
c. T.H. Morgan  
d. T. Boveri
111. Dairy search index is otherwise called as  
a. Sunderasan index  
b. Tomar index  
c. Rice index  
d. BLUP
112. The most accurate aid to selection is  
a. Individual selection  
b. Progeny testing  
c. Pedigree selection  
d. Sib selection
113. To increase the milk production of the indigenous dairy cattle breeds in plains, most suitable breed for crossing is  
a. Brown Swiss  
b. Danish  
c. Jersey  
d. Holstein-Friesian
114. Morphologically the Y chromosome of *Bos indicus* bulls is  
a. Metacentric  
b. Acrocentric  
c. Submetacentric  
d. Telocentric
115. For carcass traits in sheep the practical aid to selection is  
a. Family selection  
b. Progeny testing  
c. Sib selection  
d. Individual selection
116. Dolly was created by  
a. Embryo transfer  
b. Nuclear transfer from embryonic stem cells  
c. Nuclear transfer from cultured foetal cells  
d. Nuclear transfer from a quiescent mammary cells
117. Apparel wool breed of Indian sheep  
a. Nilagiri  
b. Magra  
c. Chokla  
d. Bikaneri



Answer Key

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
b	b	c	b	a	a	c	c	a	a
11.	12.	13.	14.	15.	16.	17.	18.	19.	20.
d	b	c	c	d	a	b	a	a	a
21.	22.	23.	24.	25.	26.	27.	28.	29.	30.
d	a	c	a	a	c	a	d	a	d
31.	32.	33.	34.	35.	36.	37.	38.	39.	40.
a	d	b	a	c	a	b	a	b	c
41.	42.	43.	44.	45.	46.	47.	48.	49.	50.
a	b	c	d	d	a	d	d	d	a
51.	52.	53.	54.	55.	56.	57.	58.	59.	60.
d	a	d	a	d	a	d	a	d	a
61.	62.	63.	64.	65.	66.	67.	68.	69.	70.
a	a	d	d	d	d	c	d	a	b
71.	72.	73.	74.	75.	76.	77.	78.	79.	80.
a	b	a	a	d	c	d	d	d	d
81.	82.	83.	84.	85.	86.	87.	88.	89.	90.
c	b	b	c	a	c	d	b	a	a
91.	92.	93.	94.	95.	96.	97.	98.	99.	100.
b	b	a	d	c	a	b	b	a	d
101.	102.	103.	104.	105.	106.	107.	108.	109.	110.
b	b	b	b	d	d	b	b	c	b
111.	112.	113.	114.	115.	116.	117.			
a	a	c	b	c	d	a			

**DEPARTMENT OF VETERINARY AND ANIMAL HUSBANDRY**  
**EXTENSION EDUCATION**

1. The per capita availability of milk India during 2018-19  
 a) 394 grams/ day                      c) 340grams/ day  
 b) 285 grams/ day                      d) 291 grams/ day                      (                      )
2. The per capita availability of milk for Tamil Nadu during 2018-19  
 a) 322 grams/ day                      c) 154 grams/ day  
 b) 1100 grams/ day                      d) 281 grams/ day                      (                      )
3. The milk production in India during 2018-19  
 a) 187.5 million tons                      c) 170.8 million tons  
 b) 140 million tons                      d) 165 million tons                      (                      )
4. As per 2018-19 period the highest milk per capita available state in India is  
 a) Hariyana                      c) Tamil Nadu  
 b) Punjab                      d) West Bengal                      (                      )
5. Total egg production in India for the period of 2018-19  
 a) 103.2 billion in numbers                      c) 140 billion in numbers  
 b) 170 billion in numbers                      d) 132 billion in numbers                      (                      )
6. As per 2019 livestock census, the total livestock population in India is \_\_\_\_\_  
 a) 535.78 million                      c) 512.06 million  
 b) 459.60 million                      d) 555.20 million                      (                      )
7. The per capita availability of egg for India during 2018-19  
 a) 79 egg per annum                      c) 71 egg per annum  
 b) 59 egg per annum                      d) 73 egg per annum                      (                      )
8. As per 2019 livestock census, the total Cattle population in India is \_\_\_\_\_  
 a) 190.90 million                      c) 192.49 million  
 b) 170 million                      d) 180.90 million                      (                      )
9. Compare to 2012 livestock Census in 2019 livestock population is decreased in ---- percentage  
 a) 6.0 %                      c) 4.60 %  
 b) 7.02%                      d) 3.0 %                      (                      )
10. Total Milk Production of world during 2017-18  
 a) 827.88 million tonnes                      c) 600.1 million tonnes  
 b) 700 million tonnes                      d) 820.11 million tonnes                      (                      )
11. GDP contribution by livestock in general \_\_\_\_\_ during 2017-18  
 a) 4.1%                      c) 5.1%  
 b) 4.3%                      d) 6%                      (                      )
12. GDP contribution by livestock in agriculture \_\_\_\_\_ during 2017-18  
 a) 28.2%                      c) 25.6%

- b) 27.4%    d) 29.8%    (                          )
13. Highest milk producing state in India is \_\_\_\_\_  
a) Punjab    c) Tamil Nadu  
b) Andhra Pradesh    d) Uttar Pradesh    (                          )
14. In which year, India Veterinary Council Act was formed \_\_\_\_\_  
a) 1984    c) 1990  
b) 2019    d) 2000    (                          )
15. In India, Animal Welfare Board was formed in the year of \_\_\_\_\_  
a) 1962    c) 1972  
b) 1965    d) 1969    (                          )
16. As per 20<sup>th</sup> Livestock Census, the position of Tamil Nadu in Poultry population is  
\_\_\_\_\_  
a) First    c) Second  
b) Fourth    d) Fifth    (                          )
17. In India, Wildlife Protection act was enacted on \_\_\_\_\_  
a) 1972    c) 1983  
b) 2010    d) 2005    (                          )
18. Who is the current chairman of animal welfare board \_\_\_\_\_  
a) Shrimati Rukmini Devi    c) Dr. O.P. Chaudhary  
b) AK Mishra    d) Vargheese kurien    (                          )
19. Mischief by killing, poisoning, maiming or rendering useless any animal is punishable under sections \_\_\_\_\_  
a) 428 and 429 I.P.C    c) 125 and 126 I.P.C  
b) 328 and 329 I.P.C    d) 95 and 96 I.P.C    (                          )
20. Bestiality is punishable under section is \_\_\_\_\_  
a) 177 I.P.C    c) 77 I.P.C  
b) 377 I.P.C    d) 187 I.P.C.    (                          )
21. PCA act means \_\_\_\_\_  
a) Prevention of Cruelty to animals    c) Prevention of Culling of Animals  
b) Protection of Cruelty to Animals    d) Prevention of Crime to Animals    (                          )
22. The performing animals rules is framed by \_\_\_\_\_  
a) 1973    c) 1979  
b) 1975    d) 1974    (                          )
23. The Famous NGO in Tamil Nadu  
a) Blue Cross of India    c) Animal Aid Unlimited  
b) 'Buddha Society for Animal Welfare    d) Let's Live Together    (                          )

24. Which year Animal Birth Control (Dogs) Rules, is enacted  
 a) 2001 c) 2008  
 b) 2002 d) 2009 ( )
25. In which year the Prevention and Control of Infectious and Contagious Diseases in Animals Act is enacted  
 a) 2001 c) 2009  
 b) 2018 d) 2010 ( )
26. Animal Birth Control (Dogs) Rules was passed in the year  
 a) 2009 c) 2008  
 b) 2002 d) 2001 ( )
27. In which year the amendment was made for inclusion of Jallikattu bull under performing of animals category  
 a) 2011 c) 2008  
 b) 2002 d) 2009 ( )
28. Any animal that's diseased, fatigued that is used for transport is punishable under rule of  
 a) The Prevention of Cruelty to Draught and Pack Animals Rules, 1965 c) The Prevention of Cruelty to Animals (Licensing of Farriers) Rules, 1965  
 b) The Transport of Animal Rules, 1973 d) The Performing animals ([Registration](#)) Rules, 2001 ( )
29. The per capita availability of egg for Tamil Nadu during 2018-19  
 a) 322 eggs per annum c) 394 eggs per annum  
 b) 372 eggs per annum d) 265eggs per annum ( )
30. Which category of animal are not allowed for transport as per the Transport of Animal Rules, 1973  
 a) Advance stage of Pregnant and estrus c) Young  
 b) Milking animal d) Kids ( )
31. Use of spiked biked prohibited under the rule of  
 a) The Prevention of Cruelty to Draught and Pack Animals Rules, 1965 c) The Prevention of Cruelty to Animals (Licensing of Farriers) Rules, 1965  
 b) The Performing animals ([Registration](#)) Rules, 2001 d) The Transport of Animal Rules, 1973 ( )
32. Prohibition of markets, Fairs exhibition. etc in the controlled areas during disease out breaks under law of  
 a) The Livestock Importation Act, 1898 c) The Prevention and Control of Infectious and Contagious Diseases in

- Animals Act, 2009
- b) The Prevention of Cruelty to Animals, 1960                      d) Food Safety and Standards Act, 2006 (                      )
33. What is punishment for poaching, illegal trade at first time under Wildlife Protection Act, 1972
- a) Three years imprisonment or fine Rs. 10,00,000                      c) Three years imprisonment or fine Rs. 30,00,000
- b) No punishment                      d) One year imprisonment or Rs. fine 10,000 (                      )
34. Penalties for placing infected animal or carcass in the river as per The Prevention and Control of Infectious Disease in Animals Act, 2009
- a) Fine Rs.2000 or one month imprisonment                      c) Three years imprisonment or fine Rs. 30,00,000
- b) Fine Rs.5000 or one month imprisonment                      d) One year imprisonment or Rs. fine 10,000 (                      )
35. Pioneered in the setting up of the Animal Welfare Board in India
- a) Shrimati Rukmini Devi                      c) Gauri Maulekhi
- b) Anoop Anand                      d) MD. Zabi Khan (                      )
36. Tamil Nadu rank in egg production
- a) Second                      c) Third
- b) Fourth                      d) First (                      )
37. A common name for non-profit animal welfare organizations around the world
- a) SPCA                      c) Blue cross of India
- b) Animal welfare board                      d) PETA (                      )
38. It was the first Society for the Prevention of Cruelty to Animals
- a) SPCA                      c) Blue cross of India
- b) Animal welfare board                      d) PETA (                      )
39. The fullform of SPCA
- a) Society for the Prevention of Cruelty to Animals                      c) Society for the Protection of Cruelty to Animals
- b) Society for the Prevention of Crime to Animals                      d) Society for the Prevention of Control to Animals (                      )
40. Prohibiting certain forms of animal fighting is one of the issues regulated by the:
- a) The Livestock Importation Act, 1898                      c) The Prevention and Control of Infectious and Contagious Diseases in Animals Act, 2009
- b) The Prevention of Cruelty to                      d) Food Safety and Standards (                      )

Animals, 1960

Act, 2006

41. What is the rank of India in livestock population in the world?  
 a) Second c) First  
 b) Seven d) Eight ( )
42. When the first livestock census was conducted in India  
 a) 1910 c) 1930  
 b) 1925 d) 1919 ( )
43. SIP stands for  
 a) Sanitary Import Permit c) Sanitary Intensive Permission  
 b) Successful information permission d) Sanitary Inclusive Permit ( )
44. AQCS stands for  
 a) Animal Quarantine and Certification Services c) Aquatic Quarantine and Certification Services ( )  
 b) Animal Quality and Certification Services d) Annual Quarantine and Certification Services ( ))
45. As per 20<sup>th</sup> Livestock Census the position of Tamil Nadu Sheep population  
 a) First c) Fourth  
 b) Eight d) Fifth ( )
46. According to Animal Birth Control Rules 2001 the age for sterilization of dog is  
 a) Three months c) Four months  
 b) Six months d) Five months ( )
47. For punishment for teasing of wild animal based Wild Life Protection Act , 1972  
 a) Three Years or fine upto Rs. 25,000 c) One Years or fine upto Rs. 25,000  
 b) Two Years or fine upto Rs. 5,000 d) Three Years or fine upto Rs. 35,000 ( )
47. Punishment for using oxytocin to induce milk llegal  
 a) Three Years or fine upto Rs. 25,000 c) One Years or fine upto Rs. 25,000 ( )  
 b) Two Years or fine upto Rs. 5,000 d) Three Years or fine upto ( )

Rs. 35,000

48. The Export value of India Livestock and Livestock products during 2018-19
- |                      |                      |
|----------------------|----------------------|
| a) 230,772,619 lakhs | c) 20,000 lakhs ( )  |
| b) 40,000,00 lakhs   | d) 430,772,619 lakhs |
- 
49. Voluntarily hurting by means of shooting, stabbing or cutting of an animal is punishable under IPC sections
- |            |                |
|------------|----------------|
| a) IPC 336 | c) IPC 226 ( ) |
| b) IPC 338 | d) IPC 440     |
- 
50. Tamil Nadu ranks in meat production (2018-19)
- |           |              |
|-----------|--------------|
| a) Fourth | c) Fifth ( ) |
| b) Sixth  | d) Seventh   |
- 
51. NPBB was established in the year
- |         |             |
|---------|-------------|
| a) 2014 | c) 2010 ( ) |
| b) 2012 | d) 2000     |
- 
52. NCBB was initiated by merging which of the following schemes
- |                      |                  |
|----------------------|------------------|
| a) NPCBB             | c) IDDP ( )      |
| b) SIQ & CMP and A-C | d) All the above |
- 
53. Main objective of NPBB programme is
- |                           |                      |
|---------------------------|----------------------|
| a) Quality AI at doorstep | c) Fodder supply ( ) |
| b) Quality treatment      | d) Advisory services |
- 
54. Ministry of Fisheries, Animal husbandry and Dairying was formed in the year
- |         |             |
|---------|-------------|
| a) 2019 | c) 2018 ( ) |
| b) 2012 | d) 2015     |
- 
55. Which one of the following is known as saving certificate scheme for farmers
- |                            |                           |
|----------------------------|---------------------------|
| a) Kisan Vikas Patra (KVP) | c) Krishi Ambani Bima ( ) |
|                            | Yojana                    |
| b) Garam Sinachi Yojana    | d) PMSGSY                 |

56. Kisan Vikas Patra (KVP) was launched by India post in the year  
 a) 1998 c) 2000 ( )  
 b) 1995 d) 2002
57. Krishi Ambani Bima Yojana was started in the year  
 a) 2014 c) 2018 ( )  
 b) 2010 d) 2016
58. Soil health card scheme  
 a) Feb 2015 c) April 2015 ( )  
 b) Mar 2015 d) May 2015
59. Deen Dayal Upadhaya Grameen Kaushalya Yojana mainly insists  
 a) Youth empowerment c) Women employment ( )  
 b) Women empowerment d) Youth employment
60. Deen Dayal Upadhaya Grameen Kaushalya Yojana was established in the year  
 a) 2000 c) 2014 ( )  
 b) 2018 d) 2020
61. Pradhan Mantri Fasal Bima Yojana is related to  
 a) Fodder cultivation c) Animal purchase ( )  
 b) New Crop Insurance Scheme d) Animal insurance scheme
62. PM Kisan Maan Dhan Yojana (PM-KMY) is meant for  
 a) Old age pension of Rs 3000 /month c) Pension scheme for all ( )  
 b) Old age pension of Rs 2000 / month d) Disabled pension of Rs 3000
63. Livestock Insurance was started in  
 a) 11<sup>th</sup> and 12<sup>th</sup> five year plan c) 13<sup>th</sup> five year plan ( )  
 b) 9<sup>th</sup> and 10<sup>th</sup> five year plan d) 10<sup>th</sup> and 11<sup>th</sup> five year plan
64. Livestock Insurance was implemented all over the country in the year  
 a) 2012 c) 2016 ( )  
 b) 2014 d) 2010
65. National livestock mission was launched in the year  
 a) 2014-15 c) 2000-01 ( )  
 b) 2012-13 d) 2011-12



66. Rashtriya Pashudhan Vikas Yojana was started in the year  
 a) 2010 c) 2018 ( )  
 b) 2019 d) 2014
67. Startup India Scheme was established to start new business during the year  
 a) 2015 c) 2018 ( )  
 b) 2017 d) 2019
68. NMSA stands for  
 a) National Mission of Supporting Agriculture c) National Mission of Sustainable Aquaculture ( )  
 b) National Mission of Standardization Agriculture d) National Mission of Sustainable Agriculture
69. ARYA (Attracting and Retaining Youth in Agriculture) was launched by  
 a) GOI c) ICAR ( )  
 b) Ministry of Agriculture d) IARI
70. Zero budget natural farming (ZBNF) was started in the year  
 a) 2018 c) 2010 ( )  
 b) 2019 d) 2017
71. Main objective of National Mission for Sustainable Agriculture (NMSA) is  
 a) More crop per drop c) More profit ( )  
 b) Reduce cost of production d) More production
72. Pradhan Mantri Kaushal Vikas Yojana (PMKVY) is related to  
 a) Employment creation c) Job development initiative ( )  
 b) Skill development initiative d) Agriculture and AH development initiative
73. Pradhan Mantri Kaushal Vikas Yojana (PMKVY) was launched in the year  
 a) 2000 c) 2016 ( )  
 b) 2010 d) 2019
74. NRLM stands for  
 a) National Rural Livelihood Mission c) National Rural Living Mission ( )  
 b) National Rural Livestock Mission d) National Rural Livelihood Management
75. Kisan credit cards scheme was started in  
 a) 2015 c) 2000 ( )  
 b) 2012 d) 1998-99

76. Dairy Processing & Infrastructure Development Fund (DIDF) was started in the year  
 a) 2013 ( ) c) 2019 ( )  
 b) 2012 ( ) d) 2017 ( )
77. Rashtriya Gokul Mission (RGM) was launched in the year  
 a) 2006 ( ) c) 2010 ( )  
 b) 2014 ( ) d) 1999 ( )
78. Gopal Ratna awards meant for  
 a) Farmer maintaining best cross breed animal ( ) c) High producing farmer ( )  
 b) Farmer maintaining the best herd of Indigenous Breed ( ) d) Farmer practicing integrated farming ( )
79. National Animal Disease Control Programme (NADCP) was launched with the objective of  
 a) Eradicating FMD & Brucellosis ( ) c) All livestock diseases ( )  
 b) FMD ( ) d) Brucellosis ( )
80. National Animal Disease Control Programme (NADCP) was launched in the year  
 a) 2007 ( ) c) 2015 ( )  
 b) 2008 ( ) d) 2019 ( )
81. e- pashuhaat portal is related to  
 a) Bovine breeders ( ) c) Animal Health ( )  
 b) Livestock scheme ( ) d) Livestock Census ( )
82. The Objective of National Dairy Plan I  
 a) Improving livelihood of rural farmers ( ) c) Increase population of dairy animals ( )  
 b) Increase productivity of milch animals ( ) d) Control and prevention of diseases in dairy ( )
83. The abbreviation of NITI Aayog  
 a) National Institute for Transforming India ( ) c) National Institute for Transferring India ( )  
 b) National Information for Transforming Industries ( ) d) National Industries for Transforming India ( )
84. What is meant by marginal cost  
 a) Change in total cost/Change in total output ( ) c) Change in marginal cost/Change in total output ( )  
 b) Change in total output / Change in total cost ( ) d) Change in total cost/Change in marginal ( )

output

85. A summary statement of all the assets and liabilities of a business at a given point of time is called as
- |                              |                      |     |
|------------------------------|----------------------|-----|
| a) Net Worth statement       | c) Fixed Cost        | ( ) |
| b) Profit and Loss statement | d) Capital Budgeting |     |
86. A financial statement employed to assess the performance of farm business
- |                              |                      |     |
|------------------------------|----------------------|-----|
| a) Net Worth statement       | c) Fixed Cost        | ( ) |
| b) Profit and Loss statement | d) Capital Budgeting |     |
87. Expansion for IRR in economics
- |                                |                           |     |
|--------------------------------|---------------------------|-----|
| a) Internal Rate of Returns    | c) Indian Rate of Reading | ( ) |
| b) Internal Registered Returns | d) Indian Rupee Rate      |     |
88. Viable Livestock Project should have
- |  |  |     |
|--|--|-----|
| a) BCR more than one, negative NPW, IRR greater than the opportunity cost of capital | c) BCR less than one, positive NPW, IRR greater than the opportunity cost of capital | ( ) |
| b) BCR less than one, positive NPW, IRR greater than the opportunity cost of capital | d) BCR more than one, positive NPW, IRR greater than the opportunity cost of capital |     |
89. Undiscounted measures in project appraisal techniques
- |                             |  |     |
|-----------------------------|--|-----|
| a) Pay back period          | c) Average annual proceeds of rupee outlay | ( ) |
| b) Internal Rate of Returns | d) A and B                                 |     |
90. Fixed cost is otherwise called as
- |                  |                     |     |
|------------------|---------------------|-----|
| a) Sunk cost     | c) Variable costs   | ( ) |
| b) Explicit cost | d) Opportunity cost |     |
91. The cost which varies with level of production is called as
- |                      |                  |     |
|----------------------|------------------|-----|
| a) Over head charges | c) Total costs   | ( ) |
| b) Marginal cost     | d) Variable cost |     |
92. Minimum of average total cost is called as
- |                     |                     |     |
|---------------------|---------------------|-----|
| a) Break-Even Point | c) Shut-Down Point  | ( ) |
| b) Marginal Cost    | d) Opportunity cost |     |
93. Which value is desirable in Hen Housed Egg Production (HHEP)
- |                         |                         |     |
|-------------------------|-------------------------|-----|
| a) Values of 285 or 80% | c) Values of 150 or 80% | ( ) |
| b) Values of 200 or 60% | d) Values of 265 or 60% |     |

94. To measure overall efficiency of a broiler farm, the measure used is  
 a) Hen Housed Egg Production                      c) Broiler Farm Efficiency Factor (                      )  
 b) Broiler Farm Efficiency Index                      d) Net Feed Efficiency Index
95. Share of the promoter in starting a business is called  
 a) Current cost    c) Margins money (                      )  
 b) Indirect cost    d) Selling cost
96. Kissan Call Centre Number is  
 a) 1800-180-1551    c) 1800-180-1684 (                      )  
 b) 1800-180-1561    d) 1800-180-1666
97. Gradual decline in the value of an asset is  
 a) Depreciation    c) Appreciation (                      )  
 b) Value    d) Liability
98. GDP and GNP belongs  
 a) Income theory    c) Price theory (                      )  
 b) C and D    d) Micro economics
99. Net return is measured by  
 a) Gross income - Expenditure                      c) Gross income - Profit (                      )  
 b) Gross income – Capital Expenditure                      d) Expenditure - Gross income
100. Crop loan is an example of  
 a) Long term liability    c) Medium term liability (                      )  
 b) Long term Asset    d) Medium term asset

**ANSWER KEYS**

1	<b>A</b>	11	<b>A</b>	21	<b>A</b>	31	<b>A</b>	41	<b>A</b>	51	<b>A</b>	61	<b>B</b>	71	<b>A</b>	81	<b>A</b>	91	<b>D</b>
2	<b>A</b>	12	<b>B</b>	22	<b>A</b>	32	<b>B</b>	42	<b>D</b>	52	<b>D</b>	62	<b>A</b>	72	<b>B</b>	82	<b>B</b>	92	<b>A</b>
3	<b>A</b>	13	<b>A</b>	23	<b>A</b>	33	<b>A</b>	43	<b>A</b>	53	<b>A</b>	63	<b>D</b>	73	<b>C</b>	83	<b>A</b>	93	<b>A</b>
4	<b>B</b>	14	<b>A</b>	24	<b>A</b>	34	<b>A</b>	44	<b>A</b>	54	<b>A</b>	64	<b>B</b>	74	<b>A</b>	84	<b>A</b>	94	<b>B</b>
5	<b>A</b>	15	<b>A</b>	25	<b>B</b>	35	<b>A</b>	45	<b>C</b>	55	<b>A</b>	65	<b>A</b>	75	<b>D</b>	85	<b>A</b>	95	<b>C</b>
6	<b>A</b>	16	<b>A</b>	26	<b>D</b>	36	<b>D</b>	46	<b>C</b>	56	<b>A</b>	66	<b>B</b>	76	<b>D</b>	86	<b>B</b>	96	<b>A</b>
7	<b>A</b>	17	<b>A</b>	27	<b>A</b>	37	<b>A</b>	47	<b>C</b>	57	<b>A</b>	67	<b>A</b>	77	<b>B</b>	87	<b>A</b>	97	<b>A</b>
8	<b>C</b>	18	<b>C</b>	28	<b>B</b>	38	<b>A</b>	48	<b>A</b>	58	<b>A</b>	68	<b>D</b>	78	<b>B</b>	88	<b>D</b>	98	<b>A</b>
9	<b>B</b>	19	<b>A</b>	29	<b>D</b>	39	<b>A</b>	49	<b>B</b>	59	<b>D</b>	69	<b>C</b>	79	<b>A</b>	89	<b>D</b>	99	<b>A</b>
10	<b>A</b>	20	<b>B</b>	30	<b>A</b>	40	<b>C</b>	50	<b>C</b>	60	<b>C</b>	70	<b>B</b>	80	<b>D</b>	90	<b>A</b>	100	<b>C</b>

**ANIMAL NUTRITION**

1. Following one is a production value type of feeding standard
  - a) Hay standard
  - b) NRC
  - c) AFRC
  - d) Scandinavian Feed Unit
2. Deficiency of ----- mineral in diet leading to orthopedic diseases (DOD) in growing horses.
  - a) Zinc
  - b) Manganese
  - c) Copper
  - d) Selenium
3. Protein value is highest in
  - a) Maize
  - b) Soybean meal
  - c) Fish meal
  - d) Rice bran
4. -----should be supplied freely to the working horse feed because considerable quantities are excreted in the sweat.
  - a) Mineral mixture
  - b) Salt
  - c) Probiotics
  - d) Oil
5. The “Polyneuritis” is caused by the deficiency of ----- in poultry.
  - a) Folic acid
  - b) Zinc
  - c) Thiamine
  - d) Copper
6. The concentrate and forage ratio of the hard working horse feed is
  - a) 30:70
  - b) 50:50
  - c) 70:30
  - d) 0:100
7. The following one is not the reason for laying large size egg by the layer bird
  - a) High energy feed
  - b) High methionine
  - c) High temperature
  - d) High linoleic acid
8. The following is an example of prebiotics
  - a) Fructan-oligosaccharides
  - b) Lactobacillus
  - c) Sachromyces
  - d) Amprolium
9. The common coccidiostat used in the broiler feed is
  - a) Oxytetracycline

- b) Gentamycin
  - c) Lasalocid
  - d) Xanthophyll
10. Addition of following one to the feed will reduce dustiness of feed and laminitis incidence in horses
- a) Grain
  - b) Wheat bran
  - c) Vegetable oil
  - d) Antibiotics
11. A condition called Stiff lamb disease caused by
- a) Vitamin A
  - b) Vitamin K
  - c) Vitamin E
  - d) Vitamin B<sub>1</sub>
12. Rapeseed meal contains an anti-nutritional factor which severely harm the ducks.
- a) Gossipol
  - b) Mimosine
  - c) Erucic acid
  - d) Nitrate
13. The following one will affect the egg shell quality
- a) Temperature
  - b) Bird age
  - c) Nutrition
  - d) All the above
14. Perosis or slipped tendon in chicks is caused by the deficiency of
- a) Manganese
  - b) Folic acid
  - c) Choline
  - d) All the above
15. Rodents are ----- wild animals
- a) Carnivorous
  - b) Herbivorous
  - c) Omnivorous
  - d) None of the above
16. The energy requirement of the broiler finisher ration (BIS) is ----- Kcal /kg.
- a) 2800
  - b) 3000
  - c) 3800
  - d) 3200
17. An additional quantity of nutrient given over the requirement is
- a) Nutrient allowance
  - b) Nutrient requirement
  - c) Additives
  - d) Enzymes

18. The energy requirement of the grower chicken ration is ----- Kcal /kg
- 2500
  - 2800
  - 3000
  - 3500
19. Birds experiencing diseases require an increase intake of some nutrients such as
- Prebiotics
  - Enzymes
  - Antibiotics
  - Vitamins
20. The following one may be added in the layer chicken diet to meet out the calcium requirements
- Gypsum
  - $\text{NaHCO}_3$
  - Shell grit
  - Silica
21. The exact quantity of nutrient given to the animal to meet out optimum production is
- Nutrient requirement
  - Nutrient allowance
  - Enzyme
  - Antibiotics
22. The amount of drinking water required for livestock becomes much higher as the temperature rises above
- $25^\circ\text{C}$
  - $12^\circ\text{C}$
  - $5^\circ\text{C}$
  - $0^\circ\text{C}$
23. The following one is not a feed additive
- Oilcake
  - Antibiotics
  - Prebiotics
  - Binders
24. The following one is added in the poultry diet as feed additives to minimize the diseases and improve the growth.
- Bacitracin
  - Enzyme
  - Pellet binders
  - Emulsifiers
25. Addition of fat in the poultry diet will
- Increase calorific value of feed
  - Increase growth
  - Decrease growth
  - Increase fertility
26. The energy requirement of the creeper ration for piglets is ----- Kcal /kg
- 3360
  - 2200

- c) 2800  
d) 2000
27. Creep feed for piglet is otherwise known as  
a) Pre-starter feed  
b) Starter feed  
c) Grower feed  
d) Finisher feed
28. Live microbial culture added as feed additive in the pig feed is  
a) *Saccharomyces* spp.  
b) Mannan oligosaccharides  
c) Streptococci  
d) E-coli
29. Antibiotics are added in the livestock ration as growth promoting agent at  
a) Sub-therapeutic level  
b) Therapeutic level  
c) Above therapeutic level  
d) None of the above
30. The energy requirement of the guinea pig ration is ----- Kcal /kg  
a) 2800  
b) 2200  
c) 2000  
d) 3500
31. Restricted feeding is recommended commonly in ----- stage of poultry  
a) Chick  
b) Grower  
c) Starter  
d) Layer
32. The best cereal source for the horses is  
a) Wheat  
b) Oats  
c) Horse gram  
d) Rice
33. The pH of a very good silage is  
a) 3.5-4.2  
b) 4.2-4.5  
c) 4.5-4.8  
d) 4.8-5.2
34. The “curled toe paralysis” is deficiency of ----- in poultry.  
a) Folic acid  
b) Manganese  
c) Thiamine  
d) Riboflavin
35. Oxidative stress is more common in  
a) Poultry  
b) Horse  
c) Pig



- d) Cattle
36. Example for comparative type feeding standard is
- a) Kellner feeding standard
  - b) NRC
  - c) AFRC
  - d) Scandinavian feed unit
37. Higher energy value is present in
- a) Maize
  - b) Fish meal
  - c) Oilcake
  - d) Rice bran
38. The common coccidiostat used in the broiler feed is
- a) Oxytetracycline
  - b) Gentamycin
  - c) Amprolium
  - d) Xanthophyll
39. Comparative type of feeding standard for ruminant is
- a) Hay standard
  - b) Morrison standard
  - c) Kellner standard
  - d) Armsby standard
40. The “star gazing posture” is deficiency of ----- in poultry.
- a) Folic acid
  - b) Manganese
  - c) Thiamine
  - d) Riboflavin
41. An emaciated condition Marasmus caused by deficiency of
- a) Zinc
  - b) Cobalt
  - c) Iodine
  - d) Manganese
42. Example for digestible nutrient type of feeding standard is
- a) Kellner feeding standard
  - b) Indian standard
  - c) AFRC
  - d) Scandinavian feed unit
43. A deficiency disorder ‘scurvy’ is caused by
- a) Vitamin B
  - b) Vitamin C
  - c) Vitamin K
  - d) Vitamin D
44. A hormone involving regulation of calcium metabolism in the body is
- a) Thyroxine
  - b) Parathormone
  - c) Oxytocin

- d) Vasopressin
45. Outer coarse coat of the grains is
- Bran
  - Gluten
  - Hull
  - Polish
46. Cyanogens is found more in-----
- Soyabean meal
  - Maize
  - Sorghum
  - Linseed
47. Anaemia mainly occurs in livestock due to deficiency of
- Iron
  - Folic acid
  - Copper
  - Zinc
48. A substance depressing dietary utilization of protein is
- Saponin
  - Oxalate
  - Nitrate
  - Mimosine
49. Rapeseed meal contains ----- which severely harm the livestock and poultry.
- Oxalic acid
  - Glucosinolates
  - Phytic acid
  - Tannins
50. The RQ value of carbohydrate is -----.
- 1.0
  - 0.8
  - 0.7
  - 0.5
51. A deficient level of essential amino acid in soybean meal is
- Methionine
  - Lysine
  - Valine
  - Arginine
52. Rapeseed meal contains an anti-nutritional factor such as -----which severely harm the ducks.
- Gossipol
  - Mimosine
  - Erucic acid
  - Nitrate

53. Example for the prebiotics is
- Fructo-oligosaccharides
  - Lactobacillus
  - Sachromyces
  - Amprolium
54. Addition of following one to the feed will reduce dustiness of feed and laminitis incidence of the horses
- Grain
  - Wheat bran
  - Vegetable oil
  - Antibiotics
55. Toxicity of aflatoxin is greatest for
- Chicks
  - Ducklings
  - Turkey poults
  - Gooslings
56. The common coccidiostat used in the broiler feed is
- Oxytetracycline
  - Gentamycin
  - Amprolium
  - Xanthophyll
57. Urea enrichment of paddy straw done with -----% of urea.
- 4
  - 8
  - 12
  - 16
58. The “star gazing posture” is deficiency of ----- in poultry.
- Folic acid
  - Manganese
  - Thiamine
  - Riboflavin
59. Rabbits are able to tolerate upto -----% crude fibre in the diet.
- 5
  - 10
  - 15
  - 20
60. Nitrogen and Sulphur ratio needed for optimum dietary utilization of Urea is
- 5:1
  - 10:1
  - 15:1
  - 20:1
61. The following one is added in the poultry diet as feed additives to minimize the diseases and improve the growth.
- Bacitracin
  - Enzyme
  - Pellet binders

- d) Emulsifiers
62. The energy requirement of the creeper ration for piglets is ----- Kcal /kg
- 3360
  - 2200
  - 2800
  - 2000
63. Creep feed for piglet is otherwise known as
- Pre-starter feed
  - Starter feed
  - Grower feed
  - Finisher feed
64. Antibiotics are added in the ration as growth promoting agent at
- Sub-therapeutic level
  - None of the above
  - Therapeutic level
  - Above therapeutic level
65. Live microbial culture added as feed additive in the pig feed is
- Sacchromyces spp.
  - Mannon oligosaccharides
  - Streptococci
  - E-coli
66. The energy requirement of the grower chicken ration is ----- Kcal /kg
- 2500
  - 2800
  - 3000
  - 3500
67. Birds experiencing diseases require an increase intake of some nutrients such as
- Prebiotics
  - Enzymes
  - Vitamins
  - Antibiotics
68. The following one may be added in the layer chicken diet to meet out the calcium requirements
- Gypsum
  - $\text{NaHCO}_3$
  - Shell grit
  - Silica
69. The “curled toe paralysis” is deficiency of ----- in poultry.
- Folic acid
  - Manganese
  - Thiamine
  - Riboflavin

70. Low milk fat syndrome is caused by rations those are rich in -----.
- Protein
  - Fat
  - Carbohydrate
  - Minerals
71. Protein value is highest in
- Maize
  - Beef Tallow
  - Fish meal
  - Rice bran
72. -----should be supplied freely to the working horse feed because considerable quantities are excreted in the sweat.
- Mineral mixture
  - Salt
  - Oil
  - Probiotics
73. Restricted feeding is recommended commonly in ----- stage of poultry
- chick
  - grower
  - starter
  - laying
74. The following is an example of prebiotics
- Fructo-oligosaccharides
  - Sachromyces
  - Lactobacillus
  - Amprolium
75. The best cereal source for the horses is
- Wheat
  - Oats
  - Horse gram
  - Rice
76. Parrot beak occurs in chick embryos due to the deficiency of
- Biotin
  - Riboflavin
  - Manganese
  - Magnesium
77. Processing of feeds is primarily done for
- Alter particle size
  - Change moisture content
  - Change the feed density
  - All of the above
78. Animal protein factor found in
- Fish Meal
  - Meat Meal
  - Liver Residue Meal
  - Blood Meal

79. An additional quantity of nutrient given over the requirement is
- Nutrient allowance
  - Nutrient requirement
  - Additives
  - Enzymes
80. The amount of water required for animals becomes much higher as the temperature rises above
- 25 °C
  - 12 °C
  - 5 °C
  - 0 °C
81. An early sign of ----- deficiency in sheep is a loss of crimp of wool.
- Cobalt
  - Copper
  - Zinc
  - Molybdenum
82. The "Pica" is caused by the deficiency of ----- in cattle.
- Calcium
  - Phosphorus
  - Magnesium
  - Sulphur
83. The concentrate and forage ratio of the hard working horse feed is
- 30:70
  - 50:50
  - 70:30
  - 0:100
84. The common coccidiostat used in the broiler feed is
- Oxytetracycline
  - Gentamycin
  - Lasalocid
  - Xanthophyll
85. Addition of following one to the feed will reduce dustiness of feed and laminitis incidence in horses.
- Grain
  - Wheat bran
  - Vegetable oil
  - Antibiotics
86. Perosis or slipped tendon in chicks is caused by the deficiency of -----.
- Manganese
  - Folic acid
  - Choline
  - All the above
87. The energy requirement of the broiler finisher ration (BIS) is ----- Kcal /kg.
- 2800
  - 3800
  - 3000

- d) 3200
88. The following one is not a feed additive
- a) Oilcake
  - b) Antibiotics
  - c) Prebiotics
  - d) Binders
89. Metabolic water produced per gram of protein is -----.
- a) 0.4 g
  - b) 0.8 g
  - c) 0.1 g
  - d) 0.12 g
90. Ideal protein is a most recent method for evaluating dietary protein for -----.
- a) Chicks
  - b) Calves
  - c) Growing Pigs
  - d) Foals
91. The Vitamin which helps in coagulation of blood is -----.
- a) Vitamin E
  - b) Vitamin A
  - c) Vitamin K
  - d) Vitamin C
92. Intake of forages gives high proportion of ----- in the rumen.
- a) Acetate
  - b) Propionate
  - c) Butyrate
  - d) All of the above
93. High protein green grasses and legumes are difficult to ensile satisfactory because-----  
-----.
- a) Low soluble carbohydrate content
  - b) High Buffering capacity
  - c) Both the above
  - d) None of the above
94. Nutritive ratio is wider when the ration contain-----.
- a) High Legume
  - b) High Green grass
  - c) High Oilcake
  - d) High Straw
95. Gluten is generally not fed to non-ruminants due to
- a) Bulkiness
  - b) Poor protein quality

- c) Unpalatability  
d) All of the above.
96. Hay can be stored if moisture content is below-----%
- a) 5 - 10  
b) 15 - 20  
c) 25 - 30  
d) 40 - 45
97. ----- is an excellent source of energy and B-complex vitamins among the following milling by-products.
- a) Bran  
b) Hull  
c) Husk  
d) Polish
98. Instrument used for measuring energy metabolism in animal is known as -----  
---
- a) Respiration Calorimeter  
b) Bomb Calorimeter  
c) Psychometric Chamber  
d) None of the above
99. Which of the following is toxic factor present in Cotton Seed Cake
- a) Phytate  
b) Gossypol  
c) Mimosine  
d) Linamarin
100. Deficiency of ----- causes Curled Toe Paralysis in chicks.
- a) Vitamin B<sub>1</sub>  
b) Vitamin B<sub>2</sub>  
c) Vitamin B<sub>5</sub>  
d) Vitamin B<sub>6</sub>
101. Excellent grazing grass for livestock in hot, dry areas of tropical countries is -----  
--.
- a) *Cyanodon dactylon*  
b) *Cenchrus ciliaris*  
c) *Vigna catjang*  
d) *Pennisetum glaucum*
102. Intake of forages gives high proportion of ----- in the rumen.
- a) Acetic acid  
b) Propionic acid  
c) Butyric acid  
d) Succinic acid



103. An example of wet processing method of grains is -----.
- Popping
  - Extruding
  - Exploding
  - Roasting
104. Fatty Liver and Kidney Syndrome in poultry caused by -----
- Riboflavin
  - Thiamin
  - Choline
  - Biotin
105. Faecal energy loss in horse is -----.
- 10%
  - 20%
  - 30%
  - 40%
106. ----- plays an important role in the production of 'crimp' in wool.
- Iron
  - Copper
  - Manganese
  - Zinc

### Answers

- |       |       |
|-------|-------|
| 1. c  | 51. a |
| 2. c  | 52. c |
| 3. c  | 53. c |
| 4. b  | 54. c |
| 5. c  | 55. b |
| 6. c  | 56. c |
| 7. c  | 57. a |
| 8. a  | 58. c |
| 9. c  | 59. c |
| 10. c | 60. c |
| 11. c | 61. a |
| 12. c | 62. a |
| 13. d | 63. a |
| 14. a | 64. a |
| 15. c | 65. a |
| 16. d | 66. a |
| 17. a | 67. d |
| 18. a | 68. c |
| 19. c | 69. d |
| 20. c | 70. b |
| 21. a | 71. c |

- 22. a
- 23. a
- 24. a
- 25. a
- 26. a
- 27. a
- 28. a
- 29. a
- 30. a
- 31. b
- 32. b
- 33. a
- 34. d
- 35. a
- 36. d
- 37. a
- 38. c
- 39. a
- 40. c
- 41. b
- 42. b
- 43. b
- 44. b
- 45. a
- 46. c
- 47. a
- 48. a
- 49. b
- 50. a

- 72. b
- 73. b
- 74. b
- 75. b
- 76. c
- 77. d
- 78. a
- 79. a
- 80. a
- 81. b
- 82. b
- 83. c
- 84. c
- 85. c
- 86. a
- 87. d
- 88. a
- 89. a
- 90. c
- 91. c
- 92. a
- 93. c
- 94. d
- 95. d
- 96. b
- 97. d
- 98. a
- 99. b
- 100. b
- 101. b
- 102. a
- 103. c
- 104. d
- 105. d
- 106. b

**VETERINARY CLINICAL MEDICINE**

1. Lactation tetany in mares is due to
  - a. Low serum  $\text{Ca}^+$  level
  - b. Low serum  $\text{Mg}^+$  level
  - c. Low serum  $\text{Ca}^+$  &  $\text{Mg}^+$  level
  - d. Low serum  $\text{Ca}^+$ ,  $\text{Mg}^+$  & P level
2. Feed additives which are in used to prevent subclinical ketosis in lactating dairy cattle is
  - a. Monensin
  - b. Niacin
  - c. Methionine
  - d. All the above
3. Transition period of dairy cows is
  - a. 1 weeks before & 1 weeks after calving
  - b. 2 weeks before & 2 weeks after calving
  - c. 3 weeks before & 3 weeks after calving
  - d. 4 weeks before & 4 weeks after calving
4. Good indicator for negative energy balance in the dairy cattle
  - a. NEFA
  - b. BHBA
  - c. Acetate
  - d. Both a & b
5. The gold-standard test for hyperketonemia in a cattle is
  - a. NEFA
  - b. BHBA
  - c. Acetate
  - d. Both a & b
6. Which biochemical profile is more sensitive test to detect metabolic derangement in pre partum cow
  - a. NEFA
  - b. BHBA
  - c. Glucose
  - d. Triglycerides
7. Which biochemical profile is more sensitive test to detect metabolic derangement in post partum cow
  - a. NEFA
  - b. BHBA
  - c. Glucose
  - d. Triglycerides
8. Repeated administration of Isoflupredone in cattle causes
  - a. Hyperkalemia
  - b. Hypokalemia
  - c. Hyponatremia
  - d. Hyponatremia
9. Milk fever is due to
  - a. Excessive loss of calcium in colostrum
  - b. Impairment of absorption of  $\text{Ca}^+$  from the intestine
  - c. Impairment of resorption of  $\text{Na}^+$  from bones
  - d. All the above
10. Calcium homeostasis in the dairy cow is mainly depends on
  - a. PTH
  - b. Vitamin D
  - c. a&b
  - d. None
11. ----- is very much essential for the releases of PTH from the parathyroid glands to correct hypocalcaemia in a cattle
  - a. Magnesium
  - b. Phosphorous
  - c. Potassium
  - d. Vitamin D
12. Normal ionized calcium level in cattle is
  - a. 2.0–3.5 mg/dl
  - b. 4.0–5.2 mg/dl
  - c. 5.5–6.5 mg/dl
  - d. 6.0–7.2 mg/dl

13. The predominant sign of stage III milk fever in cattle is
  - a. Lateral recumbency
  - b. Elevated body temperature
  - c. Hyperesthesia
  - d. Increased pulse
14. During the late gestation period addition of ----- in diet, causes hypocalcaemia in a cow.
  - a. Potassium
  - b. Magnesium
  - c. Chloride
  - d. Sulfur
15. Prolonged recumbency caused by milk fever leads elevation of
  - a. Creatine phosphokinase
  - b. Aspartate amino transferase
  - c. Alanine amino transferase
  - d. a & b
16. Degenerative ischemic muscle necrosis noticed in
  - a. Downer cow syndrome
  - b. Fat cow syndrome
  - c. Post parturient haemoglobinuria
  - d. Toxemia
17. According to the DCAD, addition of ----- the diet during prepartum will reduce the incidence of milk fever in the cows.
  - a. Sodium & Potassium
  - b. Chloride & Sulfur
  - c. Calcium & Magnesium
  - d. Phosphorous & Potassium
18. According to the DCAD, addition of ----- the diet during prepartum will induce the incidence of milk fever in the cows.
  - a. Sodium & Potassium
  - b. Chloride & Sulfur
  - c. Calcium & Magnesium
  - d. Phosphorous & Potassium
19. Secondary hypokalemia in cattle occurs due to
  - a. Anorexia
  - b. Upper GI obstruction
  - c. Abomasal disorders
  - d. All the above
20. Profound muscle weakness and lateral deviation of neck noticed even after calcium therapy in high yielding dairy cow - What may be the reason?
  - a. Hypomagnesaemia
  - b. Hypochloremia
  - c. Hypokalemia
  - d. Hypophosphatemia
21. In the following metabolic diseases which condition affects group of animals
  - a. Hypomagnesaemia
  - b. Hypocalcemia
  - c. Hypokalemia
  - d. Hypophosphatemia
22. Required Na:K ratio in rumen to improve magnesium absorption from the gut epithelium is
  - a. 1:5
  - b. 5:1
  - c. 1:3
  - d. 3:1
23. Risk factors to cause hypomagnesaemia in cattle is
  - a. Ingestion of large amount of wheat pasture
  - b. Ingestion of large amount of young growing grasses
  - c. Ingestion of large amount of cereal crops
  - d. All the above
24. Secondary form of ketosis in cattle due to
  - a. Abomasal displacement
  - b. Traumatic reticulitis
  - c. Metritis
  - d. All the above
25. Deficiency of ----- in the diet leads to high incidence of bovine ketosis
  - a. Cobalt
  - b. Phosphorous

- c. Potassium  
d. a & b
26. Ketosis most commonly occurs during  
a. First week of lactation  
b. First month of lactation  
c. Second month of lactation  
d. Late pregnancy
27. Responsible for the nervous form of ketosis in cattle due to  
a. Isopropyl alcohol  
b. Beta hydroxy butyric acid  
c. Butyric acid  
d. Propionic acid
28. Dose of protamine zinc insulin for the treatment of bovine ketosis at  
a. 100-200 IU  
b. 200-300 IU  
c. 300-400 IU  
d. 400-500 IU
29. Pregnancy toxemia in cattle is also called as  
a. Fat cow syndrome  
b. Fatty liver cow  
c. Hepatic lipidosis  
d. All the above
30. Confirmative diagnosis of Fatty liver syndrome in cattle by  
a. Serum hepatic enzymes  
b. Ketone bodies  
c. Liver biopsy  
d. a & b
31. Predisposing factor for Fatty liver syndrome in cattle is  
a. LDA  
b. Retained fetal membrane  
c. Downer cow syndrome  
d. All the above
32. Neonatal hypoglycemia is more common in  
a. Calves  
b. Lambs  
c. Piglets  
d. Puppies
33. Treatment for post parturient hemoglobinuria in cattle by  
a. 20 g sodium acid phosphate  
b. 40 g sodium acid phosphate  
c. 60 g sodium acid phosphate  
d. 80 g sodium acid phosphate
34. Low milk fat syndrome in cattle due to  
a. Low fiber diet  
b. Low concentrate in diet  
c. Low glucose in diet  
d. Low calcium in diet
35. Low milk fat syndrome in cattle treated with  
a. Magnesium oxide  
b. Sodium chloride  
c. Sodium acid phosphate  
d. Calcium gluconate
36. Falling diseases in cattle is caused by  
a. Copper deficiency  
b. Zinc deficiency  
c. Cobalt deficiency  
d. Vitamin E deficiency
37. Enzootic ataxia in sheep is caused by  
a. Copper deficiency  
b. Zinc deficiency  
c. Cobalt deficiency  
d. Vitamin E deficiency
38. Characteristic feature of anemia due to Copper deficiency in cattle is  
a. Microcytic hypochromic anemia  
b. Macrocytic hypochromic anemia  
c. Normocytic hypochromic anemia  
d. Normocytic normochromic anemia
39. Characteristic feature of anemia due to Copper deficiency in cattle is  
a. Microcytic hypochromic anemia  
b. Macrocytic hypochromic anemia  
c. Normocytic hypochromic anemia  
d. Normocytic normochromic anemia

- anemia
40. Enzootic marasmus in cattle is caused by
    - a. Copper deficiency
    - b. Zinc deficiency
    - c. Cobalt deficiency
    - d. Vitamin E deficiency
  41. Estimation of Methylmalonic acid is the precise indicator for the diagnosis of
    - a. Copper deficiency
    - b. Zinc deficiency
    - c. Cobalt deficiency
    - d. Vitamin E deficiency
  42. Estimation of Formiminoglutamic acid in urine is the precise indicator for the diagnosis of
    - a. Copper deficiency
    - b. Zinc deficiency
    - c. Cobalt deficiency
    - d. Vitamin E deficiency
  43. Characteristic feature of anemia due to Cobalt deficiency in cattle is
    - a. Microcytic hypochromic anemia
    - b. Macrocytic hypochromic anemia
    - c. Normocytic hypochromic anemia
    - d. Normocytic normochromic anemia
  44. Characteristic feature of anemia due to Iron deficiency in pig is
    - a. Microcytic hypochromic anemia
    - b. Macrocytic hypochromic anemia
    - c. Normocytic hypochromic anemia
    - d. Normocytic normochromic anemia
  45. Zn deficiency also called as
    - a. Ovine white liver diseases
    - b. Parakeratosis
    - c. Swayback diseases
    - d. Unthriftiness
  46. Retarded testicular development and poor wound healing in a bull is cause by
    - a. Copper deficiency
    - b. Zinc deficiency
    - c. Iodine deficiency
    - d. Manganese deficiency
  47. ----- is plays a vital role in bone matrix formation and synthesis of chondrotin sulfate, which is responsible for maintaining rigidity of connective tissue
    - a. Mn
    - b. Co
    - c. Zn
    - d. Ca
  48. Nutritional (enzootic) muscular dystrophy in lamb is caused by deficiency of
    - a. Zn
    - b. Mn
    - c. Vit E & Selenium
    - d. Vitamin A
  49. Mulberry heart diseases in pig is caused by deficiency of
    - a. Vit E & Selenium
    - b. Vitamin A
    - c. Zn
    - d. Vit D
  50. Preventive dose of Vitamin D2 (Calciferol) in cattle is
    - a. @100 U/kg IM
    - b. @110 U/kg IM
    - c. @1000 U/kg IM
    - d. @1100 U/kg IM
  51. Characteristic feature of lack of bone density in radiography is
    - a. Rickets
    - b. Osteomalacia
    - c. Osteodystrophia fibrosa
    - d. a & b
  52. Hydrocephalus and Microphthalmus are due to deficiency of
    - a. Vitamin A
    - b. Vitamin B1
    - c. Vitamin D
    - d. Vitamin E

53. Dose of Vitamin K1 for warfarin toxicity in dog
  - a. 1-2 mg
  - b. 2-3 mg
  - c. 3-5 mg
  - d. 5-10 mg
54. High dose of Amprolium in goat cause
  - a. Vitamin B1 deficiency
  - b. Vitamin B1 toxicity
  - c. Vitamin B12 deficiency
  - d. Vitamin B12 toxicity
55. Increased CSF pressure occurs in
  - a. Vitamin B1 deficiency
  - b. Vitamin A deficiency
  - c. Vitamin E deficiency
  - d. a&b
56. Dose of Thiamine hydrochloride in Polioencephalomalacia affected goat is
  - a. 2-5 mg/kg bwt
  - b. 5-10 mg/kg bwt
  - c. 10-15 mg/kg bwt
  - d. 15-20 mg/kg bwt
57. Niacin deficiency is more common in
  - a. Dog
  - b. Horse
  - c. Pig
  - d. Cattle
58. Lameness and Laminitis in cattle caused by----- deficiency
  - a. Choline
  - b. Niacin
  - c. Pyridoxine
  - d. Biotin
59. Goose stepping gait in pig is caused by ----- deficiency
  - a. Thiamine
  - b. Pantothenic acid
  - c. Pyridoxine
  - d. Riboflavin
60. Eclampsia in dog is treated by
  - a. 10% Calcium borogluconate
  - b. 23% Calcium gluconate
  - c. 10% Calcium gluconate
  - d. 23% Calcium borogluconate
61. Producing false evidence is punishable under IPC section
  - a. 162
  - b. 163
  - c. 192
  - d. 193
62. Issuing or singing false evidence is punishable under IPC section
  - a. 197
  - b. 176
  - c. 420
  - d. 423
63. Adulteration of food or drink meant for sale is punishable under IPC section
  - a. 270
  - b. 271
  - c. 272
  - d. 274
64. Adulteration of drugs is punishable under IPC section
  - a. 270
  - b. 271
  - c. 272
  - d. 274
65. Sale of adulterated drugs is punishable under IPC section
  - a. 274
  - b. 275
  - c. 271
  - d. 281
66. Bestiality is punishable under IPC section
  - a. 420
  - b. 377
  - c. 422
  - d. 281
67. Mischief causing damage to animals is punishable under IPC section
  - a. 420
  - b. 427
  - c. 428
  - d. 429

68. Mischief by killing or maiming animal is punishable under IPC section
- |              |        |
|--------------|--------|
| a. 420       | b. 427 |
| c. 428 & 429 | d. 430 |

**Answer**

1.	a.	Low serum Ca <sup>+</sup> level
2.	d.	All the above
3.	c.	3 weeks before & 3 weeks after calving
4.	a.	NEFA
5.	b.	BHBA
6.	a.	NEFA
7.	b.	BHBA
8.	b.	Hypokalemia
9.	d.	All the above
10.	c.	a&b
11.	a.	Magnesium
12.	b.	4.0–5.2 mg/dl
13.	a.	Lateral recumbency
14.	a.	Potassium
15.	d.	a & b
16.	a.	Downer cow syndrome
17.	b.	Chloride & Sulfur
18.	a.	Sodium & Potassium
19.	d.	All the above
20.	c.	Hypokalemia
21.	a.	Hypomagnesaemia
22.	b.	5:1
23.	d.	All the above
24.	d.	All the above
25.	d.	a & b
26.	b.	First month of lactation
27.	a.	Isopropyl alcohol
28.	b.	200-300 IU
29.	d.	All the above
30.	c.	Liver biopsy
31.	d.	All the above
32.	c.	Piglets
33.	c.	60 g sodium acid phosphate
34.	a.	Low fiber diet
35.	a.	Magnesium oxide
36.	a.	Copper deficiency
37.	a.	Copper deficiency
38.	b.	Macrocytic hypochromic anemia



39.	a.	Microcytic hypochromic anemia
40.	c.	Cobalt deficiency
41.	c.	Cobalt deficiency
42.	c.	Cobalt deficiency
43.	d.	Normocytic normochromic anemia
44.	a.	Microcytic hypochromic anemia
45.	b.	Parakeratosis
46.	b.	Zinc deficiency
47.	a.	Mn
48.	c.	Vit E & Selenium
49.	a.	Vit E & Selenium
50.	d.	@1100 U/kg IM
51.	d.	a & b
52.	a.	Vitamin A
53.	d.	5-10 mg
54.	a.	Vitamin B1 deficiency
55.	d.	a&b
56.	b.	5-10 mg/kg bwt
57.	c.	Pig
58.	d.	Biotin
59.	b.	Pantothenic acid
60.	c.	10% Calcium gluconate
61.	d.	193
62.	a.	197
63.	c.	272
64.	d.	274
65.	b.	275
66.	b.	377
67.	b.	427
68.	c.	428 & 429

### LIVESTOCK PRODUCTION MANAGEMENT

1. The removal of wool from around a sheep's eyes to prevent wool-blindness is \_\_\_\_\_  
 a) Ringing    c) Crutching  
 b) Wiggling    d) Dagging    (    )
  
2. The day-old chicks that have not been sorted by sex is called as \_\_\_\_\_  
 a) Sexed chicks    c) Straight-run chicks  
 b) Preening    d) Zoning    (    )
  
3. The components of the whole farm system interact closely in \_\_\_\_\_  
 a) Organic farming    c) Integrated farming  
 b) Mixed farming    d) Extensive farming    (    )
  
4. During 2016 – 17, the milk contribution by crossbred and exotic dairy cows in India is \_\_\_\_\_  
 a) 26.5 %    c) 35.4 %  
 b) 25.4 %    d) 20.8 %    (    )
  
5. Quarantine shed in a dairy farm should be located \_\_\_\_\_  
 a) At the entrance of the farm    c) Near to dry animal shed  
 b) At the end of the farm    d) Near to isolation shed    (    )
  
6. As per 2012 livestock census, the total bovine population in India is \_\_\_\_\_  
 a) 304.8 million    c) 283.4 million  
 b) 190.9 million    d) 300.0 million    (    )
  
7. At the time of breeding the heifer should attain \_\_\_\_\_ of the adult body weight.  
 a) 50 %    c) 85 %  
 b) 75 %    d) 60 %    (    )
  
8. Recommended method of hand milking in dairy cattle is \_\_\_\_\_  
 a) Full hand milking    c) Knuckling  
 b) Stripping    d) Full hand milking followed by stripping    (    )
  
9. Gestation period of a cow is the period between \_\_\_\_\_  
 a) Conception to calving    c) Conception to drying off  
 b) Calving to weaning    d) Calving to lactation    (    )
  
10. Majority of Indian cows attain the peak yield after parturition in \_\_\_\_\_  
 a) 1-2 weeks    c) 4-6 weeks  
 b) 3-4 weeks    d) 8-10 weeks    (    )
  
11. Covered and open area required for a bull is \_\_\_\_\_  
 a) 12 & 120 sq. m/ bull    c) 15 & 150 sq. m/ bull  
 b) 07 & 14 sq. m/ bull    d) 20 & 120 sq. m/ bull    (    )
  
12. Which of the following cattle breed is famous for "Sawai Chal"?  
 a) Gir    c) Kankrej

- b) Ongole d) Kangayam ( )
13. Highest milk producing state in India is \_\_\_\_\_  
 a) Punjab c) Tamil Nadu  
 b) Andhra Pradesh d) Uttar Pradesh ( )
14. A farming system in which animals will keep on moving from one place to another on traditional migratory routes for feeding by grazing is \_\_\_\_\_  
 a) Transhumant c) Sedentary  
 b) Nomadic d) Semi intensive ( )
15. Steaming up ration in dairy cattle is provided \_\_\_\_\_  
 a) Immediately after Parturition c) Heifer stage  
 b) At last stage of pregnancy d) Before insemination ( )
16. In India, the state with highest per capita availability of milk is \_\_\_\_\_  
 a) Punjab c) Tamil Nadu  
 b) Haryana d) Uttar Pradesh ( )
17. In India, National Centre of Organic Farming was established at \_\_\_\_\_  
 a) Pune c) Ghaziabad  
 b) Karnal d) Hyderabad ( )
18. Higher body temperature is found in \_\_\_\_\_  
 a) emaciated animals c) cows suffering from milk fever  
 b) female in late pregnancy d) malnourished animals ( )
19. Mischief by killing, poisoning, maiming or rendering useless any animal is punishable under sections \_\_\_\_\_  
 a) 428 and 429 I.P.C c) 125 and 126 I.P.C  
 b) 328 and 329 I.P.C d) 95 and 96 I.P.C ( )
20. Bestiality is punishable under section is \_\_\_\_\_  
 a) 177 I.P.C c) 77 I.P.C  
 b) 377 I.P.C d) 187 I.P.C. ( )
21. Gramapriya chicken was developed from \_\_\_\_\_  
 a) Thrissur c) Hyderabad  
 b) Bangalore d) Hosur ( )
22. In a 100-cow dairy cattle farm, milch: dry cow ratio should be \_\_\_\_\_  
 a) 60: 40 c) 75: 25  
 b) 50: 50 d) 90: 10 ( )
23. The vitamin absent in chicken egg is \_\_\_\_\_  
 a) Vitamin A c) Vitamin C  
 b) Vitamin K d) Vitamin D ( )

24. Brooding temperature for chicks during first week of age is \_\_\_\_\_<sup>0</sup>C  
a) 37.5                                      c) 30  
b) 35    d) 40    (    )
25. The position of egg in the setter during incubation should be \_\_\_\_\_  
a) Broad end up                                      c) Horizontal  
b) Narrow end up                                      d) None of the above                                      (    )
26. The moisture content of poultry litter should not exceed  
a) 15- 20 %                                      c) 35-40 %  
b) 25-30 %                                      d) 40-45 %                                      (    )
27. In English class, the yellow skin is present in \_\_\_\_\_ chicken breed  
a) Sussex    c) Australorp  
b) Cornish    d) Orpington                                      (    )
28. Central Training Institute for poultry production and management is situated at \_\_\_\_\_  
a) Hasserghata                                      c) Izatnagar  
b) Hyderabad                                      d) Mumbai                                      (    )
29. The physiological zero for chicken eggs is about \_\_\_\_\_  
a) 27°C    c) 20°C  
b) 18°C    d) 24°C                                      (    )
30. Maximum permissible level of ammonia in poultry houses is \_\_\_\_\_  
a) 55 ppm    c) 35 ppm  
b) 25 ppm    d) 45 ppm                                      (    )
31. Young one of rabbit is called as \_\_\_\_\_  
a) Bunny    c) Doe  
b) Nanny    d) Buck                                      (    )
32. The home tract of kathiawari horse breed is \_\_\_\_\_  
a) Himalayan ranges                                      c) Gujarat  
b) Rajasthan                                      d) Manipur                                      (    )

33. As per the 19<sup>th</sup> Livestock census the total horse population in India is  
a) 0.725 million    c) 0.612 million  
b) 0.625 million    d) 0.319 million    (    )
34. Tattooing in mouse can be done at \_\_\_\_\_  
a) Base of the ears    c) Flank region  
b) Base of the tail    d) shoulder region    (    )
35. Young one of guinea fowl is called as \_\_\_\_\_  
a) Poult    c) Squab  
b) keet    d) Cygnet    (    )
36. The person who is experienced in maintaining the horse hoof is known as \_\_\_\_\_  
a) Farrier    c) Horse handler  
b) Equine podiatry    d) Hoof tester    (    )
37. Camel can tolerate extreme dehydration to lose up to \_\_\_\_\_ its body weight  
a) 40%    c) 20%  
b) 30%    d) 10%    (    )
38. The brown colour of eggshell is due to the pigment, \_\_\_\_\_  
a) Carotenoids    c) Xanthophylls  
b) Protoporphyrin    d) Melatonin    (    )
39. The act of parturition in rabbit is called as \_\_\_\_\_  
a) Kindling    c) Farrowing  
b) Kidding    d) None of the above    (    )
40. HDEP of layer birds at 30 weeks of age under optimal condition is \_\_\_\_\_  
a) 92 %    c) 88 %  
b) 98 %    d) 82 %    (    )
41. The atmospheric air condenses over eggshell and form water droplets over eggshell, which is called as \_\_\_\_\_  
a) Condensing    c) Sweating  
b) Dripping    d) Shrinkage    (    )

42. Complete parts of oviduct in chronological order are  
 a) Infundibulum- Isthmus- Magnum- Uterus -Vagina  
 b) Infundibulum- Magnum-Isthmus- Uterus -Vagina  
 c) Infundibulum- Magnum-Isthmus- Uterus  
 d) Infundibulum- Uterus -Isthmus- Magnum- Vagina ( )
43. Floor space required for egg type chicken under cage system during 9 -18 weeks of age.  
 a) 0.50 sq.ft c) 0.75 sq.ft  
 b) 0.30 sq.ft d) 0.60 sq.ft ( )
44. In a breeder farm, the female bird is inseminated once in ----- days intervals.  
 a) 10 c) 5  
 b) 7 d) 2 ( )
45. The thermoneutral zone for adult dairy cattle is \_\_\_\_\_  
 a) 41 – 68°F c) 50 – 78°F  
 b) 70 – 88°F d) 50 – 68°F ( )
46. The swamp buffaloes distributed mostly in upper Brahmaputra valley of Assam is \_\_\_\_\_  
 a) Luit c) Toda  
 b) Ghurrah d) Chhattisgarhi ( )
47. Pea comb is the typical character of \_\_\_\_\_ breed  
 a) Leghorn c) Rhode Island Red  
 b) Cornish d) New Hampshire ( )
48. Restricted feeding is mostly followed in  
 a) Layer breeders c) Layers  
 b) Broilers d) Broiler breeders ( )
49. The creep feeding space in farrowing pen should be maintained at \_\_\_\_\_ by providing artificial lighting until the piglets are three to four days old.  
 a) 22 to 24°C c) 24 to 28°C  
 b) 30 to 32°C d) 32 to 34°C ( )
50. In layer birds, during grower stage \_\_\_\_\_ hours of light are required for better production.  
 a) 16 c) 14  
 b) 18 d) 12 ( )
51. The American Merino breed of sheep is classified as \_\_\_\_\_  
 a) carpet wool breed c) fur sheep breed  
 b) long wool breed d) fine wool breed ( )
52. The number of pairs of needle teeth present in piglets  
 a) 2 c) 6  
 b) 4 d) 8 ( )
53. Duration of heat in sow is  
 a) 2-3 days c) 8-10 days

- b) 4-5 days d) 18-21 days ( )
54. Whitten's effect is more commonly observed in  
a) Rabbit c) Mice  
b) Hamster d) Guinea pig ( )
55. The offspring coming from a male donkey and mare is termed as  
a) Mule c) Broken horse  
b) Cob d) Hinny ( )
56. The record of the ancestors of a particular animal is recorded in its  
a) Performance record c) Pedigree  
b) Phenotype d) Genetic map ( )
57. In young piglet's needle teeth should be clipped within  
a) 3 days after birth c) After weaning  
b) After 10 days of birth d) After 30 days of birth ( )
58. Boar odour is a common problem seen in  
a) Uncastrated young male c) Uncastrated adult male  
b) Castrated young male d) Castrated adult male ( )
59. The color of light having calming effect on the broilers, therefore used during catching is  
a) Blue c) Red  
b) White d) Yellow ( )
60. Hamsters are more active during \_\_\_\_\_  
a) Day time c) Nighttime  
b) Both day and night d) Only during evening ( )
61. In 2018, the per capita consumption of chicken meat in India is about \_\_\_\_\_--  
a) 3350 g c) 2150 g  
b) 1200 g d) 3890 g ( )
62. Fertilization take place in which part of reproductive tract of chicken.  
a) Ovary c) Infundibulum  
b) Isthumus d) Uterus ( )
63. Breed of poultry developed by Karnataka Veterinary and Animal Sciences University  
a) Grampriya c) Swarnadhara  
b) Vanaraja d) Krishibro ( )
64. The advantage of free-range housing system includes \_\_\_\_\_  
a) Saving of feed c) No labour requirement for management  
b) Less expensive d) All the above ( )
65. Which of the following breeds of class has feathered shank?  
a) American c) Asiatic

- b) English d) Mediterranean ( )
66. The home tract of Marwari sheep breed is  
 a) Himalayan Ranges c) Haryana  
 b) Rajasthan d) Manipur ( )
67. Which one of the following layer strain chicken lay white eggs.  
 a) Bab Cock BV-300 c) Bab Cock BV-380  
 b) BablonaHarko d) Sever 579 ( )
68. In India, most commonly practicing mating system in pig is  
 a) Hand mating c) Pen mating  
 b) Flock mating d) Herd mating ( )
69. “Ringtail” is a disease of rat caused by  
 a) Virus c) Fungus  
 b) Bacteria d) Low relative humidity ( )
70. Which one of the following is the smallest breeds of rabbit?  
 a) White giant c) New Zealand White  
 b) Angora d) Netherland Dwarf ( )
71. The lamb shed of a dimension of 7.5m x 4m x 3m high can accommodate a maximum of \_\_\_\_\_  
 a) 100 animals c) 75 animals  
 b) 125 animals d) 50 animals ( )
72. The hen housed egg production of hybrid commercial layer is \_\_\_\_\_  
 a) 180 eggs c) 220 eggs  
 b) 360 eggs d) 320 eggs ( )
73. Hitkari is the breed of chicken developed at \_\_\_\_\_  
 a) Hyderabad c) IARI  
 b) CARI d) Kerala ( )
74. The native tract of Arichevaadu, the Tamil Nadu sheep breed is \_\_\_\_\_  
 a) Tirunelveli c) Madurai  
 b) Sivagangai d) Ramnad ( )
75. Growth rate of sheep population in India during 2007 – 2012 is \_\_\_\_\_  
 a) - 7.54 % c) - 9.07 %  
 b) - 8.07 % d) - 3.82 % ( )
76. Broken mouthed ewe retained in breeding flock because of excellent breeding performance.  
 a) Gimmer c) Seggy  
 b) Crone d) Gummer ( )
77. The covered area required for an adult ewe/ buck in Indian condition is \_\_\_\_\_  
 a) 20 sq.ft c) 10 sq.ft



- b) 15 sq.ft    d) 25 sq.ft    (    )
78. Normally, chicken consumes \_\_\_\_\_ amount of water for each gram of feed consumed
- a) 0.5 ml    c) 1.5 ml  
b) 1ml    d) 2 ml    (    )
79. Name the smallest sheep breed with typical reversed “U” shaped body conformation from rear side.
- a) Nellore    c) Mandya  
b) Magra    d) Hassan    (    )
80. Central Avian Research Institute is located at \_\_\_\_\_
- a) Izatnagar    c) Hyderabad  
b) Banglore    d) Delhi    (    )
81. The appearance and view of the whole building will be shown in \_\_\_\_\_
- a) Floor plan    c) Elevation  
b) Master plan    d) Cross section    (    )
82. The normal pulse rate for adult sheep is \_\_\_\_\_
- a) 70 – 90 beats/min    c) 90 – 110 beats/min  
b) 60 – 70 beats/min    d) 100 – 120 beats/min    (    )
83. Gestation period of mare is about \_\_\_\_\_
- a) 150-155 days    c) 235-245 days  
b) 365-375 days    d) 335 - 345 days    (    )
84. Gestation period of sow is \_\_\_\_\_
- a) 3 months 3 weeks 3 days    c) 11 months 11 weeks 11 days  
b) 9 months 9 weeks 9 days    d) 5 months 5 weeks 5 days    (    )
85. In generally, animal houses the pitch of thatched roof should be \_\_\_\_\_
- a) 35-40°    c) 25-30°  
b) 45-50°    d) 30-35°    (    )
86. The distance between grower and layer sheds should be minimum of \_\_\_\_\_
- a) 100 m    c) 150 m  
b) 50 m    d) 75 m    (    )
87. A large enclosed area free of obstacles where the pigeons can fly as freely as they wish is referred to as \_\_\_\_\_
- a) Fly pen    b. Sputnik  
b) Aviary    d. Coops    (    )
88. In poultry house with slatted floor system of housing, slats are fitted \_\_\_\_\_ feet above the ground level.
- a) 6 - 7 feet    c) 7 - 8 feet  
b) 4 - 5 feet    d) 8 - 9 feet    (    )

89. The following vitamin should be supplemented with nutrition of Guinea pig is \_\_\_\_\_  
 a) Vitamin A c) Vitamin C  
 b) Vitamin B d) Vitamin D ( )
90. The EU ban on conventional cages took effect from 1<sup>st</sup> January of \_\_\_\_\_  
 a) 2010 b. 2011  
 b) 2012 d. 2013 ( )
91. Which one of the following breeds of class is known for egg production?  
 a) American c) Asiatic  
 b) English d) Mediterranean ( )
92. Which one the following disease of poultry is not caused by virus is \_\_\_\_\_  
 a) CRD c) Infectious Bronchitis  
 b) Fowl Pox d) Ranikhet diseases ( )
93. The biological value of egg protein is \_\_\_\_\_  
 a) 94 c) 90  
 b) 85 d) 80 ( )
94. The quantity of KMnO<sub>4</sub> and formalin is required to get 3X concentration during fumigation is about \_\_\_\_\_  
 a) 60 g and 120mL c) 120 g and 60mL  
 b) 160 g and 80mL d) 80 g and 160mL ( )
95. Reverse cages can hold of \_\_\_\_\_  
 a) 1 - 2 birds c) 5 - 6 birds  
 b) 3 - 4 birds d) 9 - 10 birds ( )
96. Feeding and watering space requirements for adult cattle and buffalo is \_\_\_\_\_  
 a) 60 – 75 cm c) 40 – 50 cm  
 b) 75 – 80 cm d) 50 – 60 cm ( )
97. As per BIS standards, minimum covered area requirement for adult male goat should be \_\_\_\_\_ sq. m. respectively.  
 a) 3.4 c) 4.5  
 b) 1.8 d) 2.4 ( )
98. Melatonin is released only at limited intervals and depends on \_\_\_\_\_  
 a) Wavelength of light c) Day- length  
 b) Intensity of light d) Color of light ( )
99. \_\_\_\_\_ is the fibre obtained from Angora goats.  
 a) Pashmina c) Qiviut  
 b) Cashmere d) Mohair ( )
100. Konkan Kapila cattle breed is native of \_\_\_\_\_  
 a) Maharashtra and Goa c) Kerala and Karnataka  
 b) Karnataka and Andhra d) Maharashtra and Karnataka Pradesh ( )

ANSWER KEYS

1	b	51	d
2	c	52	d
3	c	53	a
4	a	54	c
5	a	55	a
6	d	56	c
7	d	57	a
8	d	58	c
9	a	59	a
10	b	60	c
11	a	61	d
12	c	62	c
13	d	63	c
14	a	64	d
15	b	65	c
16	a	66	b
17	c	67	a
18	b	68	c
19	a	69	d
20	b	70	d
21	c	71	c
22	c	72	d
23	c	73	b
24	b	74	a
25	a	75	c
26	b	76	b
27	b	77	b
28	a	78	d
29	d	79	c
30	b	80	a
31	a	81	c
32	c	82	a
33	b	83	d
34	b	84	a
35	b	85	b
36	a	86	a
37	a	87	d
38	b	88	a
39	a	89	c
40	a	90	b

41	b	91	d
42	b	92	a
43	b	93	a
44	c	94	a
45	a	95	b
46	b	96	a
47	b	97	b
48	d	98	c
49	c	99	d
50	d	100	a

\*\*\*\*\*

**LIVESTOCK PRODUCTS TECHNOLOGY- DAIRY SCIENCE**

1. Gerber's acid is used to estimate
  - A. Fat percentage of milk
  - B. Mineral content of milk
  - C. Total solids of milk
  - D. Water adulteration
  
2. The diacetyl content of butter as per FSSAI standard is
  - A. 4 ppm
  - B. 5 ppm
  - C. 6 ppm
  - D. 3 ppm
  
3. Cow milk is yellow in colour because of the pigment
  - A. riboflavin
  - B. xanthophyll
  - C. carotene
  - D. chlorophyll
  
4. Pick out the whey cheese from the following
  - A. Camembert
  - B. Roquefort
  - C. Ricotta
  - D. Cottage cheese
  
5. The concentration of milk without applying heat is
  - A. UF
  - B. Microfiltration
  - C. Bactofugation
  - D. Clarification
  
6. Sugar percentage of sweetened condensed milk is
  - A. 11 %
  - B. 40 %
  - C. 15 %
  - D. 10 %
  
7. Specific media used for isolation of coliform
  - A. MacConkey agar
  - B. Triple sugar iron agar
  - C. Muller Hinton agar
  - D. Blood agar
  
8. Kostler No. in mastitis milk is less than
  - A. 3.5 - 4.0
  - B. 1.5 - 3.0
  - C. 4.0 - 4.5
  - D. 6.0
  
9. The P value of ghee is
  - A. 2.0-3.0
  - B. 3.0-4.0
  - C. 2.5-3.0
  - D. 1.0-2.0
  
10. The hormone responsible for ejection of milk
  - A. Vasopressin
  - B. Oestrogen
  - C. Progesterone
  - D. Oxytocin
  
11. The hardening temperature of ice cream is

- A. -20 to -25<sup>0</sup>C                      B. -30 to -35<sup>0</sup>C  
C. -23 to -29<sup>0</sup>C                      D. -25 to -30<sup>0</sup>C
12. Baudouin test is used to detect adulteration in  
A. Butter                                      B. Ghee  
C. Khoa                                        D. Channa
13. An example of unripened cheese is  
A. Cheddar cheese                      B. Camembert  
C. Mozzarella                              D. Mysost cheese
14. The iron content of khoa is more than  
A.175ppm                                      B.200ppm  
C.100ppm                                      D.250ppm
15. The shelf life of paneer at room temperature is  
A. 1 day                                        B. 4 days  
C. 3 days                                        D. 8 days
16. Iodine can be used for the detection of  
A. Starch                                        B. Water  
C. Cane sugar                                D. Skim milk powder
17. CaCl<sub>2</sub> can be used in the preparation of  
A. Cheese                                        B. Butter  
C. Khoa                                         D. Paneer
18. The acidity of fresh cow milk is  
A. 2.0 %                                        B. 0.14%-0.18%  
C. 2.0-3.0 %                                D. 0.19%
19. Ocharotoxin is produced by  
A. Aspergillus                                B. Penicillium  
C. Salmonella                                D. Mucor
20. Malta fever is caused by  
A. Salmonella                                B. Clostridium  
C. Listeria                                      D. Brucella
21. Psychrotrophic organisms will grow at  
A. 30<sup>0</sup>C                                        B.15-20<sup>0</sup>C  
C. 2-7<sup>0</sup>C                                        D. 9-10<sup>0</sup>C
22. The fat per cent of flavoured milk is more than

- A.2  
C. 1
- B.3  
D.4
23. According to PFA rule, recombined milk should contain  
A. 3.5% fat  
C. 4.0% fat
- B. 3.0 % fat  
D. 4.5% fat
24. Satisfactory temperature for cream separation is around  
A. 45<sup>0</sup>C  
C. 40<sup>0</sup>C
- B. 50<sup>0</sup>C  
D. 55<sup>0</sup>C
25. According to PFA standard, the common salt content of butter is less than  
A. 3  
C. 6
- B. 5  
D. 6.5
26. Fisher and Hooker's phase reversal theory is related with the preparation of  
A. Butter  
C. Cheese
- B. khoa  
D. Paneer
27. Makkan refers to  
A. Channa  
C. Paneer
- B. Desi butter  
D. Cream
28. The fat percent of double toned milk is  
A. 2.5%  
C. 1.5%
- B. 2.0%  
D. 3%
29. In MBRT test, very good milk will have MBRT time over  
A. 4½ hrs.  
C. 3 hrs.
- B. 5 hrs.  
D. 4 hrs
30. Mastitis milk can be detected by  
A. Somatic cell count  
C. By appearance
- B. Total plate count  
D. Phosphatase
31. Bactofugation is the process of removing bacteria at a level of  
A. 92.9%  
C. 99.9%
- B. 85%  
D.100%
32. Greenish yellow colour of whey is due to  
A. Riboflavin  
C. Vitamin A
- B. Xanthophyll  
D. Melanin
33. According to PFA rule fat percent in ice cream is

- A. 15%    B. 15%  
C. 18%    D. 10%
34. The over run in butter is  
A. 40%    B. 50%  
C. 60%    D. 25%
35. The fat percentage of unsweetened condensed milk is  
A. 0.5%    B. 5%  
C. 2.5%    D. 8%
36. Roller drying is the process used in the preparation of  
A. Paneer    B. Khoa  
C. Cream    D. Milk powder
37. Basundi is an example of  
A. Condensed milk                                    B. Evaporated milk  
C. Coagulated milk                                   D. Frozen milk
38. Fat content of fore milk is  
A. Medium    B. Low  
C. High     D. Normal
39. Recknagel's phenomenon is associated with  
A. Specific gravity of milk                         B. Freezing point of milk  
C. Boiling point of milk                            D. Specific heat of milk
40. Emulsifiers in ice cream improves  
A. Taste     B. Shelf life  
C. Flavour    D. Whipping quality
41. In India, buffalo contribution to total milk production ranges between  
A. 50 – 55%    B. 45 – 50%  
C. 35 – 40%    D. 60 – 65%
42. World milk day observed on  
A. 01 June    B. 01 July  
C. 01 August     D. 01 May
43. Normal pH for fresh sweet cow milk is  
A. 6.6    B. 4.5  
C. 5.6    D. 7.0
44. Yellow colour of the milk is due to



- A. Casein                      B. Vitamin A  
C. Cyanocobalamine        D. Carotene
45. Calf rennet is obtained from  
A. Abomasum of calves        B. Small intestine of calves  
C. Large intestine of calves    D. Spleen
46. Coliforms in Dahi should not be more than  
A. 10 / g                      B. 100 / g  
C. 40 / g                      D. 150 / g
47. Turbidity is used for finding out the efficiency of  
A. Chilling                    B. Pasteurisation  
C. Sterilization                D. Starter activity
48. Recent technique used for enumerating microbial load is  
A. DEFT test                  B. MBRT  
C. RRT                         D. GHP
49. Pimaricin is an example of  
A. Enzyme                     B. Fungicide  
C. Preservative                D. Antioxidant
50. Stoke's law is related with  
A. Butter churning          B. Clarification  
C. Microfiltration              D. Cream separation
51. The commonly occurring pathogen in ice cream is  
A. Salmonella                B. Campylobacter  
C. Listeria                     D. Leptospira
52. Stabilizer used in ice cream is  
A. GMS                        B. Pectin  
C. Potassium Sorbate        D. Sodium glutamate
53. One of the practices involved in HACCP is  
A. GMP                         B. GDP  
C. MPN                         D. DEFT
54. The milk used for production of sweetened condensed milk should not give the MBR time less than  
A. 3.5 hrs                      B. 5.5 hrs.  
C. 4.5 hrs                      D. 4.0 hrs.
55. Yakult is a popular fermented product of

- A. Spain  
C. Bulgaria
- B. Japan  
D. Denmark
56. E. Coli and Enterobacter aerogenes can be differentiated by set of biochemical tests called  
A. SCC  
C. Hotis test
- B. IMViC  
D. None of the above
57. Pick out the theory for butter churning  
A. fritz process  
C. Rahn's foam theory
- B. Alfa-laval  
D. CherryBurrell
58. Prestratification method adopted for preparation of  
A. cheese  
C. butter
- B. ghee  
D. khoa
59. The pH of coagulation of milk for channa preparation should be around  
A. 7.5  
C. 3.8
- B. 2.6  
D. 5.4
60. The chemical preservative used to increase the shelf life of khoa is  
A. potassium hydroxide  
C. potassium sorbate
- B. calcium chloride  
D. potassium dichromate
61. NDDB is located at  
a. New Delhi  
c. Ahmedabad
- b. Anand  
d. Karnal
62. Father of white revolution  
a. Lal Bahadur Shastri  
c. Vergese Kurien
- b. Sardar Vallabhbhai Patel  
d. Tribhuvandas Patel
63. The biography of Dr. Vergese Kurien is  
a. Pursuit of happiness  
c. I too had a dream
- b. Story of milk man  
d. White truth
64. The state which stands first in milk production  
a. Rajasthan  
c. Undivided Andhra Pradesh
- b. Uttar Pradesh  
d. Maharashtra
65. The state where crossbred dairy population is high

- a. Punjab  
c. Tamilnadu

- b. Uttar Pradesh  
d. Maharashtra

66. Milk from Zebu is

- a. A2 type  
c. S type

- b. A1 type  
d. b and c

67. The institute which produced first cloned buffalo in the world is

- a. TANUVAS  
c. NDRI

- b. IVRI  
d. NDDB

68. The breed which is generally used in *Jallikattu* is

- a. Alambadi  
c. Pulikulam

- b. Burgur  
d. Umblachery

69. TNLDA is stands for

- a. Tamilnadu Livestock keepers  
Development Authority  
c. Tamilnadu Landless farmers  
Development Authority

- b. Tamilnadu Land use Development  
Authority  
d. Tamilnadu Livestock Development  
Agency

70. The state where cattle slaughter is not legally prohibited

- a. Arunachal Pradesh  
c. Kerala

- b. Mizoram  
d. All the above  
e.

71. The principal carbon source for majority of the spoilage causing microorganisms in milk is

- a. Fat  
c. Lactose

- b. Protein  
d. Vitamins

72. Which one of the following is specific antimicrobial substance of milk

- a. Lactoferrin  
c. Complement

- b. Fatty acids  
d. Lysozyme

73. Summer mastitis is caused by

- a. *Streptococcus agalactia*  
c. *Corynebacterium pyogenes*

- b. *Streptococcus dysgalactia*  
d. *Streptococcus uberis*

74. *Microbacterium lacticum* is mostly derived from

- a. Milking environment  
c. Milking byres
- b. Milking personnel  
d. Milking equipment.
75. Recommended time-temperature combination for HTST pasteurization is
- a. 68.3°C for 20 min  
c. 62.8°C for 30 min
- b. 93°C for 10 min  
d. 72°C for 15 sec
76. Water content of fresh cow milk on an average is about
- a. 87.23%  
c. 60.8%
- b. 91.5%  
d. 72.9%.
77. Preservation of Evaporate Milk is by
- a. Sterilization  
c. Addition of Sodium Chloride
- b. Addition of Sugar  
d. Addition of Citric acid.
78. The per capita availability of milk in India as per 2005 -06 statistics is
- a. 220 gm  
c. 300 gm
- b. 240 gm  
d. 180 gm
79. Natural acidity of milk is due to
- a. Casein and phosphates  
c. bacteria
- b. lactic acid  
d. Mould
80. Which of the following constituent is the most variable component in a lactation
- a. lactose  
c. protein
- b. minerals  
d. fat
81. The time temperature combination in pasteurization is based on the thermal death time of
- a. *Mycobacterium paratuberculosis*  
c. *Mycobacterium tuberculosis*
- b. *Coxiella burnetti*  
d. *Brucella abortus*
82. During mastitis which one of the following constituents concentration increase in milk
- a. Casein  
c. Calcium
- b. Chloride  
d. Phosphorus
83. The group of bacteria that predominate in stored milk is
- a. Thermophills  
c. Psychrotrophs
- b. Mesophills  
d. Thermodurics
84. Phosphatase test is the test for finding out the efficiency of
- a. Sterilization  
c. Homogenization
- b. Pasteurization  
d. Vaccination
85. Milk powder can be prepared by the process called

- a. Freeze drying  
c. Spray drying
- b. Air drying  
d. Sun drying
86. Common adulterant of milk is
- a. Water  
c. Starch
- b. Sugar  
d. All of them
87. The milk most suitable for preparation of Khoa is
- a. Cow milk  
c. Sheep milk
- b. Buffalo milk  
d. Goat milk
88. Somatic cell count is associated with
- a. Mastitis  
c. Stomatitis
- b. Brucellosis  
d. Scarlet fever
89. Nisin is antibacterial substance produced by
- a. *Streptococcus lactis*  
c. *Staphylococcus aureus*
- b. *Streptococcus cremoris*  
d. *Streptococcus agalactiae*
90. Stabilizer used in ice cream is
- a. Sugar  
c. GMS
- b. Gelatin  
d. Starch
91. Post pasteurization contamination is indicated by
- a. Serratia  
c. Lactobacillus
- b. Coliforms  
d. None
92. Irradiation of milk increases
- a. Vitamin A content  
c. Vitamin K content
- b. Vitamin B content  
d. Vitamin D content
93. Operation Flood Scheme - II was implemented in the year
- a. 1970  
c. 1981
- b. 1990  
d. 1955
94. Flavour compound in Yoghurt is
- a. Diacetyl  
c. Acetone
- b. Acetaldehyde  
d. Methane
95. The most heat resistant microorganism encountered in dairy industry
- a. *Mycobacterium tuberculosis*  
c. *Coxiella burnetti*
- b. *Streptococcus lactis*  
d. *Aspergillus niger*
96. Bactofugation is the process of removing bacteria at a level of
- A. 92.9%  
C. 99.9%
- B. 85%  
D. 100%

97. Greenish yellow colour of whey is due to  
 A. Riboflavin B. Xanthophyll  
 C. Vitamin A D. Melanin
98. According to PFA rule fat percent in Ice cream is  
 A. 15% B. 15%  
 C. 18% D. 10%
99. The over run in butter is  
 A. 40% B. 50%  
 C. 60% D. 25%
100. The fat percentage of unsweetened condensed milk is  
 A. 0.5% B. 5%  
 C. 2.5% D. 8%

**Answer Key**

1.	A	46.	A	91.	B
2.	A	47.	C	92.	D
3.	C	48.	A	93.	C
4.	C	49.	B	94.	B
5.	A	50.	D	95.	C
6.	B	51.	A	96.	C
7.	A	52.	B	97.	A
8.	B	53.	A	98.	D
9.	D	54.	A	99.	D
10.	D	55.	B	100.	D
11.	C	56.	B		
12.	B	57.	C		
13.	C	58.	B		
14.	C	59.	D		
15.	A	60.	C		
16.	A	61.	B		
17.	A	62.	C		
18.	B	63.	C		
19.	A	64.	B		
20.	D	65.	C		
21.	C	66.	A		
22.	A	67.	C		
23.	B	68.	C		
24.	C	69.	D		
25.	A	70.	D		

26.	A	71.	C		
27.	B	72.	C		
28.	C	73.	C		
29.	B	74.	A		
30.	A	75.	D		
31.	C	76.	A		
32.	A	77.	A		
33.	D	78.	B		
34.	D	79.	A		
35.	D	80.	D		
36.	D	81.	B		
37.	A	82.	B		
38.	B	83.	C		
39.	A	84.	B		
40.	D	85.	C		
41.	A	86.	D		
42.	A	87.	B		
43.	A	88.	A		
44.	D	89.	A		
45.	A	90.	B		

**LIVESTOCK PRODUCTS TECHNOLOGY (MEAT SCIENCE)**

1. \_\_\_\_\_ System of dressing of carcasses is followed in modern abattoirs.
  - a). Line
  - b). Cross
  - c). Break
  - d). Joint
2. Muslim method of slaughter is also called as \_\_\_\_\_.
  - a). Haram
  - b). Halal
  - c). Kosher
  - d). Jhatkha
3. In Jewish slaughter, the butcher is called as \_\_\_\_\_.
  - a). Shochet
  - b). Shomer
  - c). Mulla
  - d). Kosher
4. Removal of blood vessels of Carcasses in Jewish slaughter is called \_\_\_\_\_.
  - a). Searching
  - b). Bunging
  - c). Porging
  - d). Portioning
5. One livestock unit is \_\_\_\_\_.
  - a). 1 Cattle=2 piglets=3 calves=5 sheep
  - b). 1 Cattle=2 calves=3 pigs=5 sheep
  - c). 1 Cattle=2 pigs=3 sheep =5 calves
  - d). 1 Cattle=2 pigs=3 calves=5 sheep
6. Bleeding time for pig is \_\_\_\_\_ minutes.
  - a). 5
  - b). 6
  - c). 7
  - d). 8
7. Casings prepared from small intestine of sheep are called \_\_\_\_\_.
  - a). weasand
  - b). Middles
  - c). Bungs
  - d). Rounds
8. Average protein content of carcass meal \_\_\_\_\_.
  - a). 50%
  - b). 30%
  - c). 70%
  - d). 40%
9. The bleeding time for cattle is \_\_\_\_\_ minutes.
  - a). 5
  - b). 6
  - c). 7
  - d). 8



10. The bleeding time for sheep is \_\_\_\_\_ minutes.
- |       |       |
|-------|-------|
| a). 5 | b). 6 |
| c). 7 | d). 8 |
11. Aspiration of blood into thoracic cavity by inserting knife too far towards the chest or over sticking causes \_\_\_\_\_
- |                   |                    |
|-------------------|--------------------|
| a). Poor bleeding | b). Back bleeding  |
| c). Rush bleeding | d). Stick bleeding |
12. Scalding temperature in pigs is about \_\_\_\_\_
- |                |                |
|----------------|----------------|
| a). 50 - 55 °C | b). 62 - 64 °C |
| c). 70 - 85 °C | d). 90 °C      |
13. Animals should be bled within \_\_\_\_\_ seconds after electrical stunning to avoid muscle splashing.
- |            |            |
|------------|------------|
| a). 60 sec | b). 30 sec |
| c). 90 sec | d). 10 sec |
14. The gelatin is obtained from the bladder of \_\_\_\_\_ is called as *Isinglass*
- |          |              |
|----------|--------------|
| a). Beef | b). Carabeef |
| c). Pork | d). Fish     |
15. Animals with less fat cover over the body and ready for slaughter are called as \_\_\_\_\_
- |                 |                |
|-----------------|----------------|
| a). Mild stock  | b). Good stock |
| c). Clean stock | d). Lean stock |
16. A male bovine castrated late in life is called as \_\_\_\_\_
- |             |           |
|-------------|-----------|
| a). Bullock | b). Steer |
| c). Stag    | d). Bull  |
17. Scalding temperature of pig \_\_\_\_\_.
- |           |           |
|-----------|-----------|
| a). 40° C | b). 35 °C |
| c). 63 °C | d). 80° C |
18. Young poultry which are 23-28 days old with an average live weight of 0.5kg are called as \_\_\_\_\_
- |          |            |
|----------|------------|
| a). Gilt | b). Weaner |
|----------|------------|

- c). Stag  
d). Poussins
- 19 Eating of dog flesh is called as \_\_\_\_\_  
a). Canophagia  
b). Hippophagia  
c). Kynophagia  
d). Caninephagia
- 20 The optimum concentration of CO<sub>2</sub> gas in stunning of pigs is \_\_\_\_\_  
a). 70%  
b). 20%  
c). 50%  
d). 90%
- 21 Eating of horse flesh is called as \_\_\_\_\_  
a). Hippophagia  
b). Caprophagia  
c). Kynophagia  
d). Biophagia
- 22 The voltage during electrical stunning of sheep is usually \_\_\_\_\_  
a). 40 V  
b). 75 – 80 V  
c). 90 V  
d). 120 V
- 23 Deer meat is called as \_\_\_\_\_  
a). Fryer  
b). Deer mutton  
c). Venison  
d). Menison
- 24 Buffalo meat is also called as \_\_\_\_\_  
a). Buff  
b). Buffen  
c). Carabeef  
d). All the above
- 25 Goat meat is called as \_\_\_\_\_  
a). Mutton  
b). Beef  
c). Venison  
d). Chevon
- 26 Area size for a medium meat plant (50,000+ units /year) is \_\_\_\_\_  
a). 1-2 acres  
b). 2-3 acres  
c). 3-4 acres  
d). 2-4 acres
- 27 The creatures which may cause contamination in abattoir are called as \_\_\_\_\_  
a). Fermins  
b). Kermins  
c). Dermins  
d). Vermins



- c). 5    d). 6
- 38 Heparin is extracted from \_\_\_\_\_  
a). Lung    b). Liver  
c). Spleen    d). Adrenal
- 39 The process of tanning sheep skin with fish oil is popularly known as \_\_\_\_\_  
a). Shammoying    b). Dying  
c). Bating    d). Desliming
- 40 Animal casings are mainly graded based on their \_\_\_\_\_  
a). Length    b). Diameter  
c). Colour    d). Moisture content
- 41 Omental fat is otherwise called as \_\_\_\_\_  
a). Caul fat    b). Suet  
c). Knob    d). Leaf fat
- 42 Rendered pig fat is called as \_\_\_\_\_  
a). Lard    b). Momo  
c). Caul fat    d). Tallow
- 43 Rendered cattle fat is called as \_\_\_\_\_  
a). Lard    b). Momo  
c). Caul fat    d). Tallow
- 44 Measly beef is caused by \_\_\_\_\_  
a). *Cysticercustenucollis*    b). *Cysticercusbovis*  
c). *Cysticercuscellusae*    d). *Multicepsmulticeps*
- 45 Measly pork is caused by \_\_\_\_\_  
a). *Cysticercustenucollis*    b). *Cysticercusbovis*  
c). *Cysticercuscellusae*    d). *Multicepsmulticeps*
- 46 Pig skin is also known as \_\_\_\_\_  
a). Pelt    b). Hide  
c). Rind    d). Lard
- 47 \_\_\_\_\_ is manufactured from the abomasum of the calf.  
a). Pepsin    b). Rennin

- c). Proteus  
d). Rennet
- 48 Dried blood is rich in amino acid \_\_\_\_\_  
a). Lysine  
b). Leucine  
c). Methionine  
d). Tryptophan
- 49 Black puddings are the edible by-products obtained from \_\_\_\_\_  
a). Bone marrow  
b). Blood  
c). Brain  
d). Kidneys
- 50 Pig skin yields large quantity of \_\_\_\_\_  
a). Collagen  
b). Elastin  
c). Gelatin  
d). Reticulin
- 51 The slunk/slink means \_\_\_\_\_  
a). 12 months old calf  
b). 2 months old calf  
c). 7 days old calf  
d). Unborn calf
- 52 The air pressure of pneumatic stunner is \_\_\_\_\_  
a). 80 – 120 bar  
b). 80 – 120 psi  
c). 3500 – 4000 psi  
d). 3500 – 4000 bar
- 53 The light intensity at detained meat room is \_\_\_\_\_  
a). 110 LUX  
b). 220 LUX  
c). 540 LUX  
d). None of the above
- 54 The normal exsanguination time for chicken is \_\_\_\_\_  
a). 1.5 to 2 min  
b). 3 to 4 min  
c). 5 to 6 min  
d). 6 to 8 min
- 55 Wetting is a \_\_\_\_\_ reaction of cleaning in a meat plant  
a). Physical  
b). Chemical  
c). Microbial  
d). Organic
- 56 Chelating agents are otherwise called as \_\_\_\_\_  
a). Halogens  
b). Amphoterics  
c). Sequestrants  
d). Halophiles
- 57 Average dressing % in Indian goats is about \_\_\_\_\_  
a). 45-50%  
b). 55%

- c). Above 70% d). 60%
- 58 Ruffle fat is a fat around \_\_\_\_\_
- a). Kidney b). Mesentery  
c). Thoracic region d). Rectum
- 59 EU regulation for water temperature required for knife sterilization in abattoir is \_\_\_\_ °C
- a). 72 b). 82  
c). 92 d). 102
- 60 The best ramp angle for loading and unloading of pigs from trucks is \_\_\_\_\_ °.
- a). 20 b). 30  
c). 40 d). 50
- 61 \_\_\_\_\_ reserves of animals are readily depleted during transit and detention
- a). Protein b). Fat  
c). Glycogen d). All the above
- 62 \_\_\_\_\_ reagent is used for dating of bruised meat
- a). Fouchet's b). TBA  
c). Voges-proskauer d). Edwards
- 63 Age of the bruises in animal is identified by \_\_\_\_\_ test
- a). Malachite green test b). Bilirubin test  
c). Remington fowrie test d). Halothane test
- 64 Double muscling in thigh region of Simmental bulls is also called as \_\_\_\_\_ effect.
- a). Symond's b). Doppelender  
c). Roger's d). Gracey's
- 65 Meat fit for human consumption by Jewish method of slaughter is known as \_\_\_\_\_
- a). Halal b). Terefa  
c). Haram d). Kosher
- 66 Meat fit for human consumption by Muslim method of slaughter is known as \_\_\_\_\_
- a). Halal b). Terefa

- c). Haram  
67 Meat unfit for human consumption by Jewish method of slaughter is known as \_\_\_\_\_  
a). Halal  
c). Haram  
68 Meat unfit for human consumption by Muslim method of slaughter is known as \_\_\_\_\_  
a). Halal  
c). Haram  
69 Five rules of \_\_\_\_\_ slaughter required for killing the animal for food are “without pause, pressure, slanting, stabbing and tearing”.  
a). Jewish  
c). Jhatka  
70 Emergency slaughter is done in animals having \_\_\_\_\_  
a). Acute pain  
c). Anthrax  
71 Casualty slaughter is done in animals having \_\_\_\_\_  
a). Acute pain  
c). Anthrax  
72 The slaughter of dead animals is called \_\_\_\_\_.  
a). Cold slaughter  
c). Casualty slaughter  
73 \_\_\_\_\_ is called as father of meat inspection.  
a). Thornton  
c). Ostertag  
74 \_\_\_\_\_ is known as sweetbreads.  
a). Heart  
c). Pancreas  
75 Trotters are \_\_\_\_\_  
a). Cattle feet
- d). Kosher  
b). Terefa  
d). Kosher  
b). Terefa  
d). Kosher  
b). Muslim  
d). None of the above  
b). Chronic condition  
d). Black quarter  
b). Chronic condition  
d). Black quarter  
b). Emergency slaughter  
d). Plain slaughter  
b). Gracey  
d). Collins  
b). Spleen  
d). Kidney  
b). Sheep feet

- c). Rabbit feet  
d). Pig feet
- 76 Scalding of turkey is usually done at \_\_\_\_\_ temperature  
a). 60°C for 60 sec  
b). 53°C for 120 sec  
c). 60° C for 120 sec  
d). 93°C for 5 sec
- 77 Meat bone ratio in dressed broiler is approximately \_\_\_\_\_  
a). 4:1  
b). 2:1  
c). 3:1  
d). 5:1
- 78 Folic acid is the rich source in \_\_\_\_\_  
a). Beef  
b). Mutton  
c). Pork  
d). Chicken meat
- 79 Thiamine is the rich source in \_\_\_\_\_  
a). Beef  
b). Mutton  
c). Pork  
d). Chicken meat
- 80 Niacin is the rich source in \_\_\_\_\_ -  
a). Beef  
b). Mutton  
c). Pork  
d). Chicken meat
- 81 Glue is the crude form of \_\_\_\_\_  
a). Collagen  
b). Gelatin  
c). Adhesive  
d). Gum
- 82 Demineralized bone is called as \_\_\_\_\_  
a). Bone ash  
b). Calcined bone  
c). Bone meal  
d). Ossein
- 83 Alpha cells of pancreas yield the \_\_\_\_\_ hormone  
a). Insulin  
b). Glucagon  
c). Parathormone  
d). Epinephrine
- 84 Deonar abattoir situated at \_\_\_\_\_  
a). Mumbai  
b). Chennai  
c). Calcutta  
d). New Delhi
- 85 Canpak system of dressing is developed and patented in \_\_\_\_\_  
a). USA  
b). Canada



- c). Russia  
86 Ossein can be obtained from\_\_\_\_\_
- a). Bones  
b). Cartilage  
c). Brain  
d). Skin
- 87 \_\_\_\_\_is used as a source of chlorine in commercial practice.
- a). Sodium hypochlorite  
b). Sodium hydroxide  
c). Calcium oxide  
d). Sodium pyrophosphate
- 88 Casings from cleaned pig stomach\_\_\_\_\_
- a). Chitterlings  
b). Maws  
c). Rounds  
d). Middles
- 89 Aspiration of blood into thoracic cavity by inserting knife too far towards the chest causes
- a). Poor bleeding  
b). Imperfect bleeding  
c). Back bleeding  
d). Rush bleeding
- 90 Equipment used for slaughter must be made of \_\_\_\_\_.
- a). Plastic  
b). Wood  
c). Non-Corrodible material  
d). None of the above
- 91 Muscular splash caused by \_\_\_\_\_.
- a). Delay between stunning and sticking  
b). Transportation  
c). Hanging  
d). None of the above
- 92 Pelt burn seen in \_\_\_\_\_.
- a). Pig  
b). Sheep  
c). Calf  
d). Cattle
- 93 Large animal skin is called as\_\_\_\_\_.
- a). Calfskin  
b). Kip  
c). Hide  
d). None of the above
- 94 Skin composed of \_\_\_\_\_has major component.
- a). Collagen  
b). Keratin  
c). Both a and b  
d). None of the above
- 95 Hyaluronidase is extracted from \_\_\_\_\_ and used as “spreading factor”

- a). Testes  
b). Thymus  
c). Thyroid  
d). Pancreas
- 96 A carcass from which meat has been sent to laboratory for further examination/test at post mortem examination is sent to \_\_\_\_\_
- a). Condemned meat room  
b). Isolation Block  
c). Detained meat room  
d). Lairage
- 97 Animals affixed the tag “S”, at ante mortem inspection is sent to the \_\_\_\_\_
- a). Condemned meat room  
b). Isolation Block  
c). Detained meat room  
d). Lairage
- 98 The gradient in a ramp for loading animals should be less than \_\_\_\_\_.
- a). 10°  
b). 20°  
c). 30°  
d). 40°
- 99 Meat containing sarcocyst is \_\_\_\_\_
- a). Rejected on aesthetic ground  
b). Rejected due to zoonoses  
c). Passed  
d). Passed with caution of cooking
- 100 Water must be distributed to all parts of the plant under adequate pressure \_\_\_\_\_
- a). 20 psi  
b). 30 psi  
c). 40 psi  
d). 50 psi

## Answer Key

Sr. No.	Answer	Sr. No.	Answer	Sr. No.	Answer	Sr. No.	Answer
1	A	26	D	51	D	76	D
2	B	27	D	52	B	77	A
3	A	28	A	53	C	78	A
4	C	29	B	54	A	79	C
5	D	30	A	55	A	80	D
6	B	31	D	56	C	81	B
7	D	32	A	57	A	82	D
8	A	33	B	58	A	83	B
9	B	34	C	59	B	84	A
10	A	35	D	60	A	85	B
11	B	36	A	61	C	86	A
12	B	37	A	62	A	87	A
13	B	38	A	63	B	88	B
14	D	39	A	64	B	89	C
15	D	40	B	65	D	90	C
16	C	41	A	66	A	91	A
17	C	42	A	67	B	92	B
18	D	43	D	68	C	93	C
19	C	44	B	69	A	94	A
20	A	45	C	70	A	95	A
21	A	46	C	71	B	96	C
22	B	47	D	72	A	97	B
23	C	48	A	73	B	98	B
24	D	49	B	74	C	99	A
25	D	50	C	75	D	100	A

## VETERINARY PREVENTIVE MEDICINE

1. The following disease causes cyanosis of comb and swelling of wattle in poultry except
  - a. Avian influenza
  - b. Newcastle disease
  - c. Avian pasteurellosis
  - d. Infectious bronchitis
2. The change of voice in dog affected with rabies is differentiated with
  - a. Trypanosomiasis
  - b. Canine babesiosis
  - c. Canine distemper
  - d. None of the above
3. Blue tongue is transmitted through
  - a. Culicoides
  - b. *Melophagus ovinus*
  - c. Semen
  - d. All the above
4. The following diseases causes corneal opacity in dog except
  - a. Trypanosomiasis
  - b. Canine Ehrlichiosis
  - c. Leptospirosis
  - d. Infectious canine hepatitis
5. Semen is the choice of sample for diagnosis of
  - a. Bovine viral diarrhoea
  - b. Infectious bovine rhinotracheitis
  - c. Foot and mouth disease
  - d. a&b
6. Treatment of choice for *Babesia gibsoni* infection in dog
  - a. Atorvaquone
  - b. Clindamycin
  - c. Imidocarb
  - d. All the above
7. Tetanospasmin block the release of
  - a. GABA
  - b. Acetylcholine
  - c. Dopamine
  - d. None of the above
8. The most commonly used antihelmintic for *Toxocara canis* in pups
  - a. Pyrantel pamoate
  - b. Fenbendazole
  - c. Praziquantel
  - d. a&b
9. Which of the following disease causes Moon blindness in horse
  - a. Leptospirosis
  - b. Brucellosis
  - c. Equine infectious anaemia.
  - d. Babesiosis
10. The choice of disinfectant for viral disease
  - a. Sodium hypochlorite
  - b. Quarternary ammonium compound
  - c. Iodophor
  - d. None of the above
11. Permissible level of aflatoxin in poultry feed
  - a. 20 ppb
  - b. 2.0 ppm
  - c. 0.002 ppm
  - d. 200 ppb
12. Listeriosis in sheep is managed with
  - a. Penicillin G@ 44000 IU/Kg b.wt
  - a. Dexamethasone @ 1.0mg/kg b.wt
  - c. Neurotropic vitamins
  - d. All the above
13. Outbreak of disease in avian population is called as
  - a. Epizootics
  - b. Enzootic
  - c. Epornitics
  - d. Panzootic
14. Scooting behaviour in dog is caused by
  - a. *Diphylidium caninum*
  - b. *Diphylobothridium latum*
  - c. *Echinococcus granulosus*
  - d. None of the above

15. Terminal dry gangrene and polyarthritis in calves is caused by  
 a. *Salmonella Dublin* b. *Salmonella typhimurium*  
 c. *Salmonella newport* d. *Salmonella arizonae*
16. Induration of udder with enlargement of supramammary lymph node occur in  
 a. Tubercular mastitis b. Staphylococcal mastitis  
 c. Mycoplasmal mastitis d. Leptospiral mastitis
17. Which of the following diseases diagnosed by Cervical mucus agglutination test in cattle  
 a. Trichomoniasis b. Genital campylobacteriosis  
 c. Salmonellosis d. a & b
18. Hyperglycemia and glycosuria one of the biochemical changes in sheep affected with  
 a. Pulpy kidney disease b. Rabies  
 c. Struck d. a&b
19. Which species are relatively resistant to anthrax  
 a. Dog and cat b. Sheep  
 c. Horse d. Cattle
20. Investigation of relationships between disease and hypothesized causal factors in a study population is known as  
 a. Case control study b. Cross sectional study  
 c. Cohort study d. Experimental study
21. Which of the following disease causes diarrhoea without straining in cattle  
 a. Salmonellosis b. Bovine viral diarrhoea  
 c. Johnes disease d. Coccidiosis
22. Which of the following vaccines are not effective for goats  
 a. Tetanus toxoid b. Black quarter vaccine  
 c. Enterotoxaemia vaccine d. Anthrax spore vaccine
23. Which of the following diseases cause immune mediated haemolytic anaemia in dog  
 a. Leptospirosis b. Canine Babesiosis  
 c. Canine Ehrlichiasis d. b&c
24. Drug of choice for haemorrhagic septicaemia in cattle  
 a. Sulphadimidine @ 150mg/Kg b. Sulphadimidine @ 100mg/Kg  
 c. Oxytetracycline @ 10mg/kg d. Oxytetracycline @ 20mg/Kg
25. Transmission of leptospirosis in dog through  
 a. Urine b. Rodents  
 c. Skin penetration d. All the above
26. Disinfectant for foot and mouth disease  
 a. 4% sodium carbonate b. 1-2% sodium hydroxide  
 c. 1-2% Formalin d. All the above
27. Sulphur granules in pus are seen in  
 a. Actinobacillosis b. Actinomycosis  
 c. Strangle d. a&b

28. *Brucella ovis* in sheep is mainly transmitted through  
 a. Venereal  
 b. Ingestion  
 c. Contact  
 d. Conjunctiva
29. Which of the following disease causes Pleurisy without effusion in cattle  
 a. Contagious bovine pleuropneumonia  
 b. Tuberculosis  
 c. Pneumonic pasteurellosis  
 d. Infectious bovine rhinotracheitis
30. Screening test for diagnosis of pullorum disease in poultry  
 a. Rapid Whole blood agglutination test  
 b. ELISA  
 c. tube agglutination test  
 d. AGID
31. Age of foot and mouth disease vaccination in calf  
 a. 4 month  
 b. 6 months  
 c. 8 month  
 d. 1 yr
32. Prolonged antibiotic treatment results in growth of  
 a. *Candida* sp  
 b. *Aspergillus* sp  
 c. *Sporotrichum* sp  
 d. None of the above
33. Shaker foal syndrome is a disease caused by  
 a. Wound botulism  
 b. Forage botulism  
 c. Carrion associated botulism  
 d. Toxicoinfectious botulism
34. False black leg in sheep is associated with  
 a. *Clostridium chauvoei*  
 b. *Clostridium septicum*  
 c. *Clostridium novyi*  
 d. b&c
35. Which of the following species is resistant to aflatoxicosis  
 a. Chicken  
 b. Turkey  
 c. Duck  
 d. Ruminants
36. Which of the following causes recurrent mastitis in cattle  
 a. *Klebsiella* sp  
 b. *Staphylococcus aureus*  
 c. *E.Coli*  
 d. *Enterococcus faecalis*
37. Metastatic infection resulting in formation of abscess in any organs of the body in horses infected with strangles known as  
 a. Chondroids  
 b. Muscle infarction  
 c. Guttoral pouch empyema  
 d. Bastard strangles
38. The deficiency of mineral in cattle affected with bovine Ephemeral fever  
 a. Magnesium  
 b. Phosphorus  
 c. Calcium  
 d. Zinc
39. An anti-cestodal drug used for used for treatment of Nasal Schistosomiasis in cattle  
 a. Niclosomide  
 b. Praziquantel  
 c. Nitroxynil  
 d. Albendazole
40. Coggins test is used for diagnosis of  
 a. Equine influenza  
 b. Equine viral rhinopneumonitis  
 c. Equine infectious anaemia  
 d. African horse sickness
41. Which of the following causes Ring worm like lesions in abortus foetus  
 a. Q-fever  
 b. Aspergillosis  
 c. Enzootic abortion  
 d. Brucellosis

42. Thin shelled egg and shell-less are noticed in  
a. Infectious bronchitis                      b. New castle disease  
c. Egg drop syndrome                      d. a&c
43. Arsenical compounds are used for treatment of  
a. Coccidiosis                      b. Hook worm  
c. Heart worm                      d. a&c
44. Ivermectin is contraindicated in collie breeds of dogs due to  
a. Mutation of MDR1 gene                      b. Presence of M protein  
c. Mutation of NDRI gene                      d. Anaphylactic reaction
45. The test is used to measure the protective antibody titre against Rabies  
a. RFFIT                      b. Direct FAT  
c. Indirect ELISA                      d. SNT
46. Which of the following causes blindness in sheep  
a. Gid                      b. Listeriosis  
c. Rabies                      d. a&b
47. Number of instance of disease or cases in a known population at designated time is called as  
a. Prevalence                      b. Incidence  
c. Cumulative incidence                      d. None of the above
48. The disease is not cause paralysis in poultry  
a. Mareks disease                      b. Infectious bronchitis  
c. New castle disease                      d. Avian influenza
49. Trickle infection in poultry is used for control of  
a. Coccidiosis                      b. Ascariasis  
c. Avian trichomoniasis                      d. Nodular taeniasis
50. The test used to measure the protective antibody titre in dog with canine distemper vaccination  
a. SNT                      b. ELISA  
c. IFAT                      d. IPT

## Answer key

1.	d	16.	a	31.	a	46.	d
2.	a	17.	d	32.	a	47.	a
3.	d	18.	d	33.	d	48.	b
4.	c	19.	a	34.	d	49.	a
5.	d	20.	b	35.	d	50.	a
6.	d	21.	c	36.	b		
7.	a	22.	c	37.	d		
8.	d	23.	d	38.	c		
9.	a	24.	a	39.	b		
10.	a	25.	d	40.	a		
11.	a	26.	d	41.	b		
12.	d	27.	d	42.	d		
13.	c	28.	a	43.	d		
14.	a	29.	b	44.	a		
15.	a	30.	a	45.	a		



**VETERINARY ANATOMY****OSTEOLOGY**

1. Axis is otherwise known as
  - a) Vertebra prominens
  - b) **Vertebra dentata**
  - c) Ambiguous vertebra
  - d) Thoracic vertebra
2. Which vertebra is called as vertebra prominens
  - a) 6<sup>th</sup> cervical
  - b) **7<sup>th</sup> cervical**
  - c) 4<sup>th</sup> cervical
  - d) 5<sup>th</sup> cervical
3. Sacrum is present in
  - a) Horse
  - b) Cattle
  - c) **Fowl**
  - d) Dog
4. Sulcus vasculosus is for the passage of
  - a) Middle sacral artery
  - b) **Middle coccygeal artery**
  - c) Lateral coccygeal artery
  - d) Femoral artery
5. Uncinate process is present in the ribs of
  - a) Horse
  - b) Dog
  - c) **Fowl**
  - d) Ox
6. The number of sternebrae in ox
  - a) 6
  - b) 5
  - c) **7**
  - d) 8
7. Anterior extremity of the sternum is called
  - a) Xiphisternum
  - b) Mesosternum
  - c) **Manubrium sternum**
  - d) Keel
8. Boat shaped sternum is present in
  - a) Ox
  - b) **Horse**
  - c) Dog
  - d) Pig
9. Identify the cranial bone
  - a) Nasal
  - b) Vomer
  - c) **Temporal**
  - d) Malar
10. One of the following is an unpaired bone
  - a) Frontal
  - b) Parietal
  - c) **Sphenoid**
  - d) Temporal
11. Identify the facial bone
  - a) Occipital
  - b) Ethmoid
  - c) **Lacrimal**
  - d) Parietal
12. Largest foramen in the skull is
  - a) Foramen lacerum
  - b) Foramen orbitrotundum
  - c) Foramen **magnum**
  - d) Optic foramen

13. Cranial and nasal cavity communicates through
- a) Lateral masses of ethmoid
  - b) Ventral nasal meatus
  - c) Cribriform plate of ethmoid
  - d) Dorsal nasal meatus
14. Sella turcica lodges the
- a) Pineal gland
  - b) Pituitary gland
  - c) Thyroid gland
  - d) Adrenal gland
15. Facial tuberosity is present above the level of
- a) 3<sup>rd</sup> cheek tooth
  - b) 1<sup>st</sup> cheek tooth
  - c) 4<sup>th</sup> cheek tooth
  - d) 2<sup>nd</sup> cheek tooth
16. Longest bone in the body of fowl is
- a) Tibio –tarsus
  - b) femur
  - c) Tarso - metatarsus
17. Third trochanter (or) trochanter tertius is present in the femur of
- a) Ox
  - b) Sheep
  - c) Horse
  - d) Goat
18. The posterior extremity of the sternum presents cartilage
- a) Meniscus
  - b) Cariniform
  - c) Ellipsoid
  - d) Xiphoid
19. Tibia is situated between the
- a) Hip and stifle
  - b) stifle and hock
  - c) Shoulder and elbow
  - d) Hock and pastern
20. In fowl, sciatic foramen of Os coxae is formed between the
- a) Ilium and ischium
  - b) Ischium and pubis
  - c) Ilium and Pubis
  - d) Pubis and femur
21. Which one of the following is named as Os navicularis
- a) Distal sesamoid
  - b) Proximal sesamoid
  - c) Dorsal sesamoid
  - d) Fabella
22. Largest carpal bone in horse
- a) Radial carpal
  - b) Third carpal
  - c) Fused second and third carpal
  - d) Fourth carpal
23. Pulley – like articular area is termed as
- a) Crest
  - b) Condyle
  - c) Trochlea
  - d) Ellipsoid

24. Deltoid tuberosity is present on the lateral surface of  
a) Scapula                      b) Radius                      c) **Humerus**                      d) Femur
25. Bones found in the soft tissues and which don't form a part of the regular skeleton  
a) Sesamoid    b) **Heterotrophic bones**                      c) Short bones                      d) Irregular bones
26. Which one of the following is an aborted long bone?  
a) Ulna of Ox                      b) **Ulna of Horse**                      c) Ribs of ox    d) Ribs of horse
27. Glenoid cavity of the scapula articulates with  
a) Head of Femur                      b) **Head of Humerus**  
c) Condyle of Tibia    d) Radius
28. In dog, Coronoid and Olecranon fossa communicates through the  
a) **Supratrochlear foramen**                      b) Nutrient foramen  
c) Foramen magnum                      d) Foramen transversarium
29. Point of elbow is formed by  
a) Anconeus process                      b) **Olecranon Process**  
c) Semilunar notch                      d) Radial tuberosity
30. Identify the vertebral formula of Ox  
a) **C<sub>7</sub> T<sub>13</sub> L<sub>6</sub> S<sub>5</sub> Cy<sub>18-20</sub>**  
b) C<sub>7</sub> T<sub>18</sub> L<sub>6</sub> S<sub>5</sub> Cy<sub>15-21</sub>  
c) C<sub>7</sub> T<sub>13</sub> L<sub>7</sub> S<sub>3</sub> Cy<sub>20-23</sub>  
d) C<sub>13-14</sub> T<sub>7</sub> LS<sub>14</sub> Cy<sub>7</sub>
31. Number of radio – ulnar arch in horse  
a) **One**                      b) Two                      c) Three                      d) Four
32. Typical pectoral girdle consists of  
a) Scapula alone                      b) Scapula and Clavicle  
c) **Scapula, Clavicle and Corocoid**                      d) Clavicle and coracoid
33. Depression leading to two or more foramina is called  
a) **Hiatus**                      b) Sinus                      c) Foramen                      d) Meatus
34. Os phrenic is present in  
a) Ox                      b) Pig                      c) **Camel**                      d) Dog
35. Father of Anatomy is

- a) Hippocrates                      b) **Aristotle**                      c) Pythagoras                      d) Sisson
36. Connective tissue covering of the bone is called
- a) Capsule                              b) Perichondrium                      c) **Periosteum**                      d) Perimysium
37. In domestic fowl the clavicles of two sides unite to form a plate called
- a) Epicleidium                      b) **Hypocledium**                      c) Keel                              d) Pectoral girdle
38. Longest and massive bone in the body of mammals is
- a) Humerus                              b) Tibia                              c) **Femur**                              d) Metacarpal
39. A small non – articular sulcus in the head of the femur is
- a) **Fovea capitis**                      b) Fossa atlantis                      c) Fovea dentis                      d) Foramen capitis
40. In mammals tarsal bones are arranged in ----- rows
- a) One row                      b) Two rows                      c) **Three rows**                      d) Four rows
41. A medial projection present in the fibular tarsal is called
- a) Calcaneal tuber                      b) **Sustentaculum talli**                      c) Tallus                              d) Tuber calicis
42. Mamillary and accessory processes are prominent in vertebrae of dog
- a) Sacral                              b) Cervical                              c) Thoracic                              d) **Lumbar**
43. “V” shaped bones present on the ventral aspect of the coccygeal vertebra of dog is called
- a) **Chevron bones**                      b) Hemal processes                      c) Pygostyle                      d) Fabella
44. Pyramid shaped last coccygeal vertebra of fowl is called
- a) Tallus                              b) Hypocledium                      c) **Pygostyle**                      d) Uncinate process
45. The anterior extremity of horse sternum presents cartilage called
- a) Xiphoid                              b) **Cariniform**                      c) Meniscus                              d) Ellipsoid
46. The hardest bone in the body of mammals is

- a) Lumbar vertebrae      b) Squamous occipital      c) **Petrous temporal**      d) Frontal

47. Thin, scroll – like bone in the nasal cavity is

- a) Hyoid                      b) Vomer                      c) Sphenoid                      d) **Turbinates**

48. Optic foramen is for the passage of

- a) Oculomotor nerve      b) Ethmoidal nerve      c) **Optic nerve**      d) Olfactory nerve

49. Facial bone situated between the vertical rami of the mandible is

- a) **Hyoid**      b) Vomer      c) Parietal      d) Nasal

50. Point of croup is formed by

- a) Tubercosae alone                      b) Tuber ischii and Trochanter major  
c) **Tuber sacrale and median sacral crest**      d) Tuber ischii alone

### ARTHROLOGY

1. In fibrous joints the opposing ends of bones are united by

- a) **White fibrous tissue**      b) Elastic tissue  
c) Cartilage      d) Bone

2. sutures are

- a) Amphiarthroses                      b) Movable joints  
c) Diarthroses                      d) **Immovable joints**

3. Intermetacarpal articulations in horse is

- a) Synchronoses                      b) **Syndesmoses**  
c) Arthroial                      d) Amphiarthroses

4. Occipito sphenoid articulation is

- a) Synostosis                      b) Syndesmoses  
c) **Synchronoses**                      d) Arthroial

5. Ossification of joint with advancing age is known as

- a) **Synostosis**                      b) Syndesmoses  
c) Synchronoses                      d) Arthroial

6. Elbow is a
- a) Condyloid joint
  - b) Arthrodia joint
  - c) Ellipsoidal joint
  - d) **Ginglymus joint**
7. Atlanto axial joint is
- a) Ginglymus joint
  - b) **Trochoid joint**
  - c) Condyloid joint
  - d) Ellipsoidal joint
8. Temporomandibular articulation are
- a) **Diarthrodial**
  - b) Synarthrodial
  - c) Amphiarthrodial
  - d) Synchrondroses
9. In cartilagenous joints the bones are united by
- a) Bone
  - b) **Cartilage**
  - c) Elastic fibres
  - d) White fibrous tissue
10. Amphiarthroses are
- a) Primary cartilagenous joints
  - b) **Secondary cartilagenous joints**
  - c) Tertiary cartilagenous joints
  - d) Quaternary cartilagenous joints
11. Diarthroses are
- a) **Synovial joints**
  - b) Primary cartilagenous joints
  - c) Fibrous joints
  - d) Secondary cartilagenous joints
12. Articular cartilages in synovial joints are
- a) Fibrocartilage
  - b) Elastic cartilage
  - c) **Hyaline cartilage**
  - d) Fibro elastic cartilage
13. Each intervertebral disc consists of a central soft, pulpy sub called
- a) Annulus fibrosus
  - b) Annulus pulposus
  - c) Nucleus fibrosus
  - d) **Nucleus pulposes**
14. A ligament surrounding the joint is called
- a) Collateral ligament
  - b) **Capsular ligament**
  - c) Annular ligament
  - d) Interosseus ligament
15. Cervical part of the supraspinous ligament is called as
- a) Superior check ligament
  - b) Inferior check ligament
  - c) **Ligamentum nuchae**
  - d) Ligamentum arteriosum
16. Ligament nuchae is inserted into the
- a) **External occipital protruberance**
  - b) Internal occipital protruberance

- c) Medial occipital protuberance                      d) Lateral occipital protuberance
17. “C” shaped inter – articular cartilages between the condyles of the tibia and femur
- a) Annulus pulposus                                      b) **Menisci**
- c) Nucleus fibrosus                                      d) Nucleus pulposus
18. Hyoid bone is for
- a) Mastication only                                      b) **Mastication and deglutition**
- c) Deglutition only                                      d) None of the above
19. Occipito atlantal joint is
- a) Trochoid joint    b) Arthrodia
- c) Ginglymus joint                                      d) Enarthroses
20. Shoulder joint is
- a) Enarthroses    b) Ginglymus
- c) Symphysis    d) Trochoid

### **MYOLOGY**

1. Accessory structures of the muscle are
- a) Blood vessels and nerves
- b) Bones and ligaments
- c) **Fascial and synovial membrane**
2. Basic property of muscular tissue is
- a) **Contraction**    b) Irritability    c) Conduction
3. Which one of the following statement is correct?
- a) **Origin of a muscle is fixed and insertion is movable**
- b) Insertion of a muscle is fixed and origin is movable
- c) Both are fixed attachments
4. Band of white fibrous tissue attaches muscle to bone is
- a) Ligament    b) Aponeurosis    c) **Tendon**
5. A broad sheet of white fibrous tissue attaches muscle is
- a) Tendon    b) **Aponeurosis**    c) Ligament
6. Active part of the locomotive apparatus is formed by
- a) Bone    b) **Muscle**    c) Joints

7. Synovial sheath encircles the  
a) **Tendon**      b) Bone      c) Muscle
8. Connective tissue covering the individual muscle fibre in  
a) **Endomyseum**      b) Perimyseum      c) Epimyseum
9. Connective tissue covering the muscle fasciculi  
a) Endomyseum      b) **Perimyseum**      c) Epimyseum
10. Connective tissue covering the whole muscle is  
a) Endomyseum      b) Perimyseum      c) **Epimyseum**
11. Cutaneous muscle developed in  
a) **Superficial fascia**      b) Deep fascia      c) Both
12. Cutaneous Omobranchialis covers the  
a) **Lateral aspect of the shoulder and arm**  
b) Lateral aspect of the abdomen  
c) Ventral aspect of the abdomen
13. Muscle used to drive away the insects that bites the animal  
a) Transverse thoracis      b) Diaphragm      c) **Cutaneous muscle**
14. Cervical part of cutaneous colli is present in  
a) Ox      b) **Horse**      c) Sheep
15. Action of pectoral muscles is to  
a) Abduct the limb      b) **Abduct the limb**      c) Rotate the limb
16. Which one of the following muscle originates from ligamentum nuchae and Supraspinous ligament  
a) **Lattissimus dorsi**      b) Deep pectoral      c) Trapezius
17. Muscle that extends from head along the neck to the arm  
a) Sterno cephalicus      b) Omotransversarius      c) **Brachiocephalicus**
18. In Ox, dorsal part of the brachiocephalicus is called  
a) Cleido-mastoideus      b) **Cleido-Occipitalis**      c) Sternomastoideus
19. Muscle which originates from the lumbo-dorsal fascia  
a) Teres major      b) Rhomboideus      c) **Lattissimus dorsi**
20. Which one of the following is a cutaneous muscle?  
a) Omohyoideus      b) **Omobranchialis**      c) Omotransversarius
21. Two divisions of the brachiocephalicus are  
a) Cleido-mandibularis and Cleido-mastoideus



- b) **Cleido-Occipitalis and Cleido-mastoideus**  
c) Sternomandibularis and sternomastoideus
22. Muscle included between the flaps of the flank is  
a) Obliques abdominis externus  
b) Obliques abdominis internus  
c) **Cutaneous trunci**
23. Coracobrachialis originates from  
a) **Coracoid process**    b) Deltoid tuberosity    c) Acromian process
24. Two heads of the deltoideus muscle are  
a) **acromial and scapular head**  
b) deltoid and scapular head  
c) Medial and lateral head
25. In Ox Subscapularis has  
a) **3 fleshy parts**    b) 2 fleshy parts    c) 4 fleshy parts
26. The origin of Biceps brachii muscle  
a) Coracoid process    b) **Tuberscapulae**    c) Deltoid tuberosity
27. Largest division of Triceps brachii  
a) **Long head**    b) Medial head    c) Lateral head
28. Musculospiral groove is for the lodgement of  
a) Coracobrachialis    b) **Brachialis**    c) Biceps brachii
29. Muscle originates from the margins of olecranon fossa  
a) **Anconeus**    b) Tensor fascia antibrachi    c) Deltoideus
30. Which one of the following muscle is used to approximate the digits?  
a) Medial digital extensor    b) **Common digital extensor**    c) Lateral digital  
extensor
31. Which one of the following muscle is used to extend the carpus and flex the  
elbow?  
a) Medial digital extensor    b) Extensor carpi radialis    c) **Lateral digital extensor**
32. Extensors of the forearm are grouped around  
a) Dorsal aspect    b) Volar aspect    c) **Dorsolateral aspect**
33. A small vestigial muscle among the flexors of the forearm  
a) Flexor carpi ulnaris    b) Pronator teres    c) **Fexor carpi ulnaris**

34. A flexor situated on the dorsolateral aspect of the forearm  
a) Flexor carpi ulnaris      b) Pronator teres      c) **Ulnaris lateralis**
35. Omotransversarius is absent in  
a) **Horse**      b) Ox      c) Buffalo
36. Three digits of deep digital flexor are  
a) Scapular, acromial and radial  
b) Radial, ulnar and scapular  
c) **Radial, ulnar and humeral**
37. Flexors of the forearm are grouped on the  
a) Dorsal aspect      b) **Volar aspect**      c) Dorsolateral aspect
38. Deepest and smallest head of the deep digital flexor  
a) **Radial head**      b) ulnar head      c) Humeral head
39. Which one of the following is situated between flexor carpi ulnaris and ulnaris lateralis?  
a) Flexor carpi radialis  
b) Superficial digital flexor  
c) **Ulnar head of deep digital flexor**
40. The most superficial head of deep digital flexor  
a) Radial head      b) Humeral head      c) **Ulnar head**
41. The muscle situated between the Medial and Lateral digital extensor is  
a) Ulnaris laterlis      b) Extensor carpi radialis      c) **Common digital extensor**
42. The muscle situated between the flexor carpi ulnaris and deep digital flexor is  
a) Ulnaris lateralis      b) **Superficial digital flexor**      c) Extensor carpi radialis
43. Which one of the following is present on the shoulder lateral aspect?  
a) **Deltoideus**      b) subscapularis      c) Teres major
44. Anterior most muscle of the arm is  
a) coracobrachialis      b) medial head of triceps      c) **Biceps brachi**
45. Which one of the following muscle is inserted on the medial aspect of the scapular cartilage?  
a) Trapezius      b) **Rhomboideus**      c) Brachiocephalicus
46. Upper boundry of jugular furrow is formed by  
a) **Brachiocephalicus**      b) Sternocephalicus      c) Omotransversarius

47. Between the brachiocephalicus and Omotransversarius which of the following nerve branch Passing through?  
a) Spinal accessory      b) Cervical spinal nerve      c) 12<sup>th</sup> cranial nerve
48. Largest of the extensor muscles of the forearm  
a) Medial digital extensor      b) Common digital extensor      c) Extensor carpi radialis
49. Largest of the flexor muscles of the forearm  
a) Superficial digital flexor      b) ulnaris lateralis      c) Deep digital flexor
50. Which one of the following muscle has 3 heads of origin?  
a) Deep digital flexor      b) flexor carpi ulnaris      c) Superficial digital flexor

**MYOLOGY ANSWERS:**

1. c
2. a
3. a
4. c
5. b
6. b
7. a
8. a
9. b
10. c
11. a
12. a
13. c
14. b
15. b
16. a
17. c
18. b
19. c
20. b
21. b
22. c
23. a
24. a
25. a
26. b
27. a

28. b
29. a
30. b
31. c
32. c
33. c
34. c
35. a
36. c
37. b
38. a
39. c
40. c
41. c
42. b
43. a
44. c
45. b
46. a
47. b
48. c
49. c
50. a

### ANGIOLOGY

1. **Mitral valve** is situated on the left AV opening.
2. The anterior uterine artery arises from the **uteroovarian artery** while the middle uterine artery arises from the **large common trunk of internal iliac artery**
3. Subcutaneous abdominal vein in cow is otherwise called as **Milk vein**
4. The left brachial artery arises from the **Brachiocephalic trunk**
5. Blood supply to the larger Blood vessel is **Vasa vasorum**
6. Pulmonary veins open into the **Left atrium**
7. Pulmonary artery arises from the **Right ventricle**
8. Aorta arises from the **Left ventricle**
9. Anterior and posterior vena cava opens into the **Right atrium**
10. **Dorsal artery** gives rise the first intercostal artery and **Subcostal artery** gives second to fifth intercostal artery.

11. The internal thoracic artery terminates into **musculophrenic and anterior abdominal**
12. External carotid artery divides into **superficial temporal and internal maxillary** artery
13. The common trunk from the external iliac artery divides into **prepubic and deep femoral** arteries.
14. The external jugular vein is formed by the union of **superficial temporal and internal maxillary** veins.
15. The **left ruminal artery** supplies the anterior 2 / 3 of the left face of rumen.
16. Pericardiacophrenic ligament is seen in **dog**
17. Right AV orifice is guarded by **Tricuspid** valve.
18. Splenic artery arises along with **right ruminal artery**
19. Median artery divides into **Radial and ulnar** arteries.
20. Mandibulo alveolar artery is a branch of **internal maxillary artery**
21. Intra thoracic branches of the brachial artery are **inferior cervical, internal thoracic and a common trunk**
22. The bicarotid trunk divides into two **common carotid** arteries.
23. Brachial artery emerges between dorsal and ventral divisions of **scalenus** muscle.
24. The opening of the great cardiac vein is **coronary sinus**
25. Ventricular walls of the heart bears muscular ridges **trabeculae carnae** except in the **conus arteriosus**
26. Pulmonary veins are **4 to 7** in number.
27. Rete mirabile cerebri is absent in **horse and dog**
28. Portal vein is formed by the union of **gastric** and **mesenteric** trunks.
29. The chief collecting trunk of lymphatic system is **thoracic duct**
30. Ciliary artery is a branch of **ophthalmic artery**
31. The beginning of aorta is called **bulbus aorta**
32. Inferior cervical artery arises from **brachial artery**
33. Mammary gland is supplied by **subcutaneous abdominal artery**
34. The internal iliac artery terminates by dividing into posterior **gluteal and internal pudic** arteries.

35. **Bronchial** artery supplies nutritional blood to lungs.
36. **Pulmonary** artery supplies functional blood to lungs.
37. Impression of heart is seen in the liver of **fowl** (species).
38. The base of the heart lies opposite to **second** intercostal space to **sixth** rib.
39. The gastro duodenal artery divides into **pancreatico duodenal and right gastroepiploic** arteries
40. The left AV opening is guarded by **bicuspid** valve.
41. Reticular artery is a branch of **left ruminal** artery.
42. The jugular vein drains into the **anterior** vena cava.
43. Extensors of the forelimb are supplied by **collateral radial artery**
44. Flexors of the forelimb are supplied by **median artery** except **ulnaris lateralis** which is supplied by **collateral radial artery**
45. Supraspinatus muscle is supplied by **suprascapular artery**
46. **Anterior gluteal** artery supplies the gluteal muscle.
47. **Posterior gluteal** artery supplies the biceps femoris.
48. Coeliac artery is a branch of **abdominal aorta**
49. Anterior tibial artery is the continuation of **popliteal** artery.
50. The three branches of the short common trunk of the internal iliac artery are **sixth lumbar, lateral sacral and anterior gluteal**
51. The ramus collateralis supplies the posterior one third of the **small intestine**
52. The prepubic artery terminates into **internal pudic and posterior abdominal** arteries.
53. **External iliac** vein drains the blood from hindlimb.
54. The saphenous artery arises from the **femoral artery** at the lower third of the femoral canal.
55. An unpaired vein attains the blood from left side of the body is **venahemiazygos** and a similar vein on the right side is called **azygos vein**
56. The right brachial artery arises from **brachiocephalic artery** and the left brachial artery arise from **common brachiocephalic trunk**
57. The thoraco – dorsal artery is a branch of **subscapular artery** supplying the **latissimus dorsi**

58. **Coronary artery** supplies blood to the heart.
59. The four heads of quadriceps are supplied by **anterior femoral artery**
60. Ramus collateralis is a branch of **anterior mesenteric artery**
61. Moderator band extends from the **interventricular septum to the** lateral wall of the ventricle.
62. Umbilical artery forms the **round ligament** of the bladder.
63. The common carotid artery terminates into **occipital, external maxillary and external carotid arteries**
64. Inferior cervical artery arises from **brachial artery**
65. The hindlimb is supplied with blood by **external iliac artery**
66. Largest venous trunk in the body is **posterior venacava**
67. **Ductus arteriosus** connects the aorta and pulmonary artery in foetal life and in adult it is transformed into **ligamentum arteriosum**
68. Structures in the carotid sheath on the right side are **common carotid artery, vagosympathetic trunk, internal jugular vein and recurrent laryngeal nerve**
69. Structures in the carotid sheath on the left side are **common carotid artery, vagosympathetic trunk and internal jugular vein**
70. The fibroserous sac encloses the heart is called **pericardium**
71. The two small bones found in the aortic ring of old animals are called **os cardis**
72. Median artery is the continuation of **brachial artery** below the elbow.
73. The heart is situated in the **middle mediastinal** space of thorax.
74. The internal spermatic artery in female is called as **utero-ovarian** artery.
75. **Superficial temporal** artery supplies the horn core.
76. The thoracic duct is formed by the union of **lumbar and gastrointestinal** trunks.
77. The terminal branches of internal maxillary artery are **malar, infraorbital, sphenopalatine and greater palatine**
78. **Deep brachial** supplies all the heads of triceps.
79. Radio – ulnar groove lodges **dorsal interosseous** artery.
80. **Sterno pericardiac** ligament attachés pericardium with the sternum.
81. The two layers of the pericardium are **fibrous and serous** layers.

82. Fluid in the parietal and visceral layers of the serous pericardium is known as **liquor pericardi**
83. **Coronary groove** indicate the division between atria and ventricles.
84. The lining membrane which lines the interior of the heart is **endocardium**
85. A crest situated between the openings of anterior and posterior vena cava is known as **intervenous crest**
86. **Musculi pectinate** are the muscular ridges present in the atrium.
87. **Trabeculae carnae** are the muscular ridges present in the ventricle.
88. Fibrous cords arising from the free ends of the valves are known as **chorda tendinae**
89. Pulmonary orifice is guarded by **three semilunar** valves.
90. **Crista supraventricularis** separates the conus arteriosus from the AV opening.
91. Conducting system of the heart include **AV node, SA node, AV bundle and terminal sub endocardial network**
92. Two anterior vena cava and a single posterior vena cava is present in **fowl**
93. Eustachian valve is present in the heart of **fowl**
94. **Aorta** is the main systemic arterial trunk.
95. Thoracic aorta enters into the abdomen through **hiatus aorticus** present in the diaphragm.
96. Common brachio cephalic trunk divides into **brachiocephalic and left brachial** arteries.
97. Brachio cephalic artery gives rise to **right brachial artery** at the level of first rib and continues as **bicarotid trunk**
98. Bicarotid trunk divides into **right and left common carotid** arteries.
99. Branches of subscapular artery are **posterior circumflex of humerus, thoracodorsal and circumflex artery of scapula**
100. **Rete mirabile cerebri** is an four sided arterial network enclosing the diaphragm – sellae.
101. Rete mirabile cerebri is formed by **vertebral, condyloid and meningeal** arteries.
102. Circulus arteriosus is otherwise known as **Circle of Willis**
103. **Emergent** artery arises from the superior face of the rete.



104. Internal iliac artery is otherwise known as **hypogastric** artery.
105. A large common trunk of interior iliac artery in female is divided into **umbilical and vesical** whereas in female **umbilical and middle uterine artery**
106. **Middle uterine** artery supplies the horn and body of uterus.
107. The hindlimb is supplied with blood by **external iliac artery**
108. Popliteal artery is the continuation of **femoral artery**
109. Popliteus is supplied by **posterior tibial artery**
110. Internal jugular vein is formed by the union of **occipital, thyroid and laryngeal** branches.
111. Cephalic vein is the continuation of **medial metacarpal** vein.
112. Accessory cephalic vein is formed by **dorsal metacarpal** vein.
113. In horse, the spur vein is known as **subcutaneous thoracic** vein.
114. Posterior vena cava is formed by union of **two common iliac** veins.
115. **Saphenous vein** is the subcutaneous vein on the medial aspect of thigh and leg.
116. **Recurrent tarsal vein** of hindlimb is used for giving I / V injection.
117. **Cephalic** vein of forelimb is used for giving I / V injection.
118. **External jugular** vein is used for giving I / V injection in large animals.
119. Internal jugular vein is absent in **horse**
120. Two main lymphatic ducts in the body are **thoracic duct and right lymphatic duct**
121. Thoracic duct arises from the **cisterna chyli**
122. Cisterna chyli is a reservoir of lymph formed by the union of **lumbar and gastrointestinal trunk**

### **NEUROLOGY**

1. The cerebellum has three peduncles namely **Brachium conjunctivum, brachium pontis and restiform body**.
2. Brachial plexus is formed by the fusion of **Last three cervical, and first two thoracic** spinal nerves.
3. Cornual nerve is a branch of **Trigeminal** nerve.
4. The terminal part of the spinal cord is called **conus medullaris**
5. Brain and spinal cord is covered by a connective tissue membrane called **meninges**

6. Meninges consist of **duramater, arachnoid and piamater** from without inward.
7. The space between the arachnoid and piamater is called **subarachnoid** space.
8. The space between the duramater and arachnoid is called **subdural** space.
9. **Olfactory** nerve is the first cranial nerve.
10. The lingual gyri consists of **vision** area.
11. The inferior cervical ganglion unites with first thoracic ganglion to form the **stellate** ganglion.
12. Jugular ganglion is seen in the **vagus** nerve.
13. Cauda equine is seen in the **spinal cord**
14. The three branches of the Trigeminal nerve are **ophthalmic, maxillary and mandibular** nerve.
15. **Trigeminal** nerve is the largest cranial nerve.
16. The finest cranial nerve is **Trochlear nerve**
17. The widest distributed cranial nerve is **vagus nerve**
18. Two major divisions of the autonomic NS are **sympathetic and parasympathetic**
19. The dorsal surface of the corpus callosum is covered by a gray matter called **indusium griseum**
20. Nerve to diaphragm is **phrenic** nerve
21. Lumbo sacral plexus is formed by the **last three lumbar and first two sacral** spinal nerves.
22. Longest cranial nerve in the body is **vagus**
23. Sensory nerve to eye is optic nerve
24. Motor nerves to eye are **oculomotor, trochlear and abducent** nerves
25. The three nerves arising from the anterior division of the lumbo sacral plexus are **iliopsoas, femoral and obturator** nerve.
26. The nerve supply to the extensors of the forelimb is by **radial** nerve and to the flexors of the forelimb is by **median** nerve.
27. The arrangement of the cerebellum is called as **arbor vitae**
28. The third and fourth ventricles communicate through **aqueduct of sylvius**
29. The motor nerve to the muscle of the tongue is **hypoglossal** nerve.

30. The four nuclei in the basal ganglion (or) corpus striatum are caudate, lenticular, amygdaloid and claustrum
31. The falx cerebri is situated in the great longitudinal fissure of the cerebrum and tentorium cerebelli is situated in the great transverse fissure of the cerebellum.
32. The facial nerve arises from the lateral parts of the corpus trapezoideum
33. The cranial nerve which is having two roots of origin is spinal accessory nerve
34. The posterior haemorrhoidal nerve is derived from 3<sup>rd</sup> and 4<sup>th</sup> sacral spinal nerves
35. Hind limb receives nerve supply from lumbo –sacral plexus.
36. Fore limb receives nerve supply from brachial plexus.
37. ----- nerve is divide into dorsal and ventral buccal nerves.
38. ----- ganglion is found in the dorsal root of the spinal nerve.
39. Thoraco dorsal nerve supplies latissimus dorsi.
40. Obturator nerve is derived from ----- division of the lumbo sacral plex.
41. 10<sup>th</sup> cranial nerve is otherwise called -----.
42. Right recurrent laryngeal nerve is present within the carotid sheath
43. Left recurrent laryngeal nerve passes under the Oesophagus.
44. saphenous nerve passes through the femoral canal.
45. Genuiculate ganglion is present in facial nerves.
46. Semilunar ganglion is present in trigeminal nerve
47. The subarachnoid cisterns are cisterna magna, cisterna pontis and cisterna fossa lateralis
48. The biggest subarachnoid cistern is cisterna magna
49. The horn core is innervated by cornual nerve.
50. Recurrent laryngeal nerve is a branch of vagus nerve
51. Trochlear nerve arises from the dorsal aspect of the brain.
52. Anterior gluteal, posterior gluteal and sciatic nerve are the major nerves arising from the posterior division of the lumbo sacral plexus.
53. Sciatic nerve terminates by dividing into peroneal and tibial nerves.
54. Gluteal muscle are innervated by anterior gluteal nerve.
55. Biceps femoris are innervated by posterior gluteal nerve.
56. Gastrocnemius are innervated by tibial nerve.

57. Complex muscle are innervated by **peroneal** nerve.
58. In brain the **grey** matter is inside and **white** matter is outside.
59. In spinal cord the **white** matter is inside and **grey** matter outside.
60. **Diaphragm sellae** is a thick fold of duramater which surrounds the pituitary.
61. Subarachnoid space is filled with **cerebrospinal fluid**
62. Along the dorsal border of the falx cerebri the arachnoid bears bulbous excrescences called **arachnoid granulations**
63. Folds of piamater extend into the ventricle of the brain as **telachoridea** of the ventricle.
64. Three parts of the brain stem are **Medulla oblongata, pons and cerebral peduncles**
65. Pituitary gland is otherwise known as **hypophysis cerebri**
66. Pineal gland is otherwise known as **epiphysis cerebri**
67. Pituitary is connected to the base of the brain through a hollow tube called **infundibulum**
68. A white body situated behind the pituitary is **mamillary body / corpus albicans**
69. A largest mass of commissural fibre which connects the cerebral hemispheres is called **corpus callosum**
70. An irregular cavity situated within each hemisphere is **lateral ventricle**
71. **septum lucidum** is the median partition between the two lateral ventricle.
72. The anterior end of the corpus callosum is **genu** and posterior end is called **splenium**
73. Largest sensory nuclei in the brain is the **optic thalamus**
74. An annular space around the thalamus is called **third ventricle** of the brain.
75. **Pineal gland** is a gland situated between the thalamus and corpora quadrigemina.
76. Three recesses present in the cavity of the third ventricle are **pincal recess, optic recess and infundibular recess**
77. **substantia nigra red nucleus** are structures placed between the corpora quadrigemia and cerebral peduncles which forms part of the extrapyramidal system.
78. Cerebellum is otherwise known as **lesser brain**
79. Cerebellum consists of a median **vermis and two lateral hemispheres**

80. **Corpus trapezoidium** is a transverse band lies behind the pons.
81. The fourth ventricle is otherwise known as **rhomboid fossa**
82. The fold of piamater which covers the conus medullaris is called **filum terminale**
83. Total number of spinal nerves arising from the spinal cord is **37 pairs** in ox **42 pairs** in horse.
84. Pneumo - gastric nerve is the other name for **vagus nerve**
85. Pathetic nerve is the other name for **trochlear nerve**
86. Recurrent laryngeal nerves innervates the muscle of **larynx** except cricothyroid.
87. Two roots of the spinal accessory nerve (11<sup>th</sup>) are **medullary and spinal** roots.
88. **Cochleovestibular nerve** is the nerve of sense of hearing and equilibration.
89. **Posterior hemorrhoidal** nerve supplies the rectum.
90. **Radial nerve** is the largest of all the nerves of the brachial plexus.
91. **Sciatic nerve** is the largest nerve in the body.
92. Sciatic nerve dips between the heads of the gastrocnemius and continues as **tibial** nerve.
93. Extensors of the hind limb are innervated by **peroneal** nerve.
94. Flexors of the hind limb are innervated by **tibial** nerve.
95. The efferent fibre of the ANS is characterized by the presence of **ganglia**
96. The preganglionic fibres are **non medullated**
97. In **parasympathetic** system, the ganglia are located in the walls of the organs supplied.
98. In **sympathetic** system, the ganglia are located close to the vertebral column.
99. Sympathetic ganglia are otherwise known as **vertebral** ganglia.
100. More peripherally situated sympathetic ganglia are called as **collateral** ganglia.
101. **Posterior mesenteric** ganglion is an unpaired ganglion of sympathetic system.

**Splanchnology:**

1. Study deals with the visceral organs of different systems in the body is
  - a) **Splanchnology**
  - b) Myology
  - c) Embryology
2. Digestive system consists of
  - a) Alimentary canal
  - b) Accessory organs
  - c) **Alimentary canal and accessory organs**
3. Alimentary canal is a
  - a) Membranous tube
  - b) Muscular tube
  - c) **Musculomembranous tube**
  - d) Hollow tube
4. Alimentary canal extends from
  - a) Oesophagus to stomach
  - b) **Lips to anus**
  - c) Mouth to anus
  - d) Mouth to rectum
5. Which one of the following is an accessory organ of digestive system?
  - a) Stomach
  - b) Mouth
  - c) **Liver**
  - d) Pharynx
6. ----- is the first section of the alimentary canal
  - a) **Cavum oris**
  - b) Rima oris
  - c) Isthmus faucium
  - d) Pharynx
7. The space between the root of the tongue, soft palate and epiglottis is
  - a) Hyo-epiglottic space
  - b) **Glosso-epiglottic space**
  - c) Vestibule
  - d) Cavum oris proprius
8. Anterior opening of the mouth is
  - a) Cavum oris
  - b) **Rima oris**
  - c) Isthmus faucium
  - d) Vestibule
9. Portion of mouth cavity between the teeth and cheek is
  - a) **Vestibule**
  - b) Cavum oris proprium
  - c) Rima oris
10. Cavum oris is longest in
  - a) Dog
  - b) Ox
  - c) **Horse**
  - d) Pig
11. Rima oris is most extensive in
  - a) Ox
  - b) **Dog**
  - c) Sheep
  - d) Fowl

12. Cavum oris is triangular in shape in  
a) **Fowl**      b) Pigs      c) Rabbit      d) Ox
13. Identify the correct answer  
a) **Vestibule is absent in fowl**  
b) Canine teeth absent in dog  
c) Dental pad is absent in ruminants  
d) Upper lip is not mobile in fowl.
14. Upper lip is more mobile than the lower lip in  
a) Ox      b) **Horse**      c) Pig
15. In Ox commissures are situated  
a) At the level of first cheek tooth  
b) **5 cm behind the corner incisor**  
c) At the level of canine tooth  
d) At the level of 3<sup>rd</sup> or 4<sup>th</sup> cheek tooth
16. Lips are not the organ of prehension in  
a) Horse      b) Sheep and Goat      c) **Ox**      d) Pig
17. Philtrum is absent in  
a) **Ox**      b) Dog      c) Horse      d) Rabbit
18. Muzzle is situated in the  
a) Lower lip      b) **Upper lip**      c) Commissure
19. Frenula labii extends from  
a) **Lips to gums**      b) Gums to tongue      c) Tongue to floor of the mouth  
d) Upper lip to lower lip
20. Muzzle is absent in  
a) Ox      b) Horse      c) **Rabbit**      d) Sheep
21. Papilla salivalis shows the opening of  
a) **Parotid gland**      b) Mandibular gland      c) Maxillary gland      d) Zygomatic gland
22. Stenson's duct is the duct of  
a) Mandibular gland      b) **Parotid gland**      c) Sublingual gland      d) Buccal gland

23. In Ox, Papilla salivalis is seen at the level of  
a) Upper 5<sup>th</sup> cheek tooth  
b) Upper 3<sup>rd</sup> cheek tooth  
c) Upper 4<sup>th</sup> cheek tooth  
d) Canine tooth
24. Papilla salivalis is at the level of upper 3<sup>rd</sup> cheek tooth in  
a) Horse and Dog    b) Dog and Ox    c) Horse and Ox    d) Ox and Rabbit
25. Zygomatic glands are present in  
a) Dog    b) Ox    c) Horse    d) Sheep
26. Mucous membrane lining the gum has  
a) Serous glands    b) Mucous glands    c) No glands    d) Mixed glands
27. Dental pad is the characteristic feature of  
a) Ruminants    b) Horse    c) Dog    d) Fowl
28. Dental pad is associated with  
a) Maxilla    b) Premaxilla    c) Nasal bone    d) Malar
29. Oral opening of the Nasopalatine duct is at the  
a) Papilla incisiva    b) Ductus incisivus    c) Barb    d) Papilla of cheek
30. In Horse, dental pad is replaced by  
a) 6 alveoli    b) 4 alveoli    c) 8 alveoli    d) 2 alveoli
31. In dog, Papilla incisiva is situated  
a) Between the ridges of hardpalate  
b) Between the dental pad and first pair of ridge  
c) Behind the 2<sup>nd</sup> pair of incisors
32. Except during deglutition, the mouth is separated from the pharynx by  
a) Soft palate    b) Cheeks    c) Hard palate    d) Anterior pillars
33. The space between the anterior and posterior pillars of the soft palate is called  
a) Tonsillar sinus    b) Glosso-epiglottic space    c) Vestibule    d) Soft palate
34. Soft palate is long and closes the Isthmus faucium in  
a) Horse    b) Dog    c) Ox    d) Fowl
35. Oral breathing is not possible in  
a) Equidae    b) Suidae    c) Ruminants    d) Canines



36. A medial prolongation of the soft palate in Pig is termed  
 a) **Uvula**      b) Anterior pillar      c) Posterior pillar
37. Soft palate is absent in  
 a) **Fowl**      b) Dog      c) Rabbit      d) Pig
38. Palatine tonsil is well developed in  
 a) Ox      b) **Dog**      c) Horse
39. Franum linguae is double in  
 a) **Pig**      b) Horse      c) Fowl
40. Sublingual fold is present in  
 a) Sheep      b) Pig      c) **Horse**
41. Ductus incisivus is the duct of  
 a) Parotid      b) Mandibular      c) **Nasopalatine**
42. Fold of mucus membrane passing from Upper jaw to Lower jaw is called  
 a) **Plica Pterygomandibularis**      b) Franum linguae      c) Franum labii
43. Well marked Torus linguae is present in  
 a) Horse      b) **Ox**      c) Dog
44. Identify the Gustatory papilla  
 a) Filliform      b) Lenticular      c) **Vallate**
46. Fold of mucus membrane passing from root of the tongue to the base of Epiglottis is  
 a) Hyo-epiglottic fold      b) **Glosso-epiglottic fold**      c) Plica pterygomandibularis
47. Find out the correct answer: (Match the following :)
- |                      |                            |
|----------------------|----------------------------|
| i) Stenson's duct    | -A) Nasopalatine gland     |
| ii) Ductus incisivus | -B) Parotid salivary gland |
| iii) Sulcus linguae  | -C) Canine teeth           |
| iv) Fangs            | -D) Dog                    |
| v) Barb              | -E) Maxillary gland        |
- a) i-B, ii-A, iii-C, iv-D, v-E  
 b) i-A, ii-B, iii-D, iv-C, v-E  
 c) **i-B, ii-A, iii-D, iv-C, v-E**
48. Lyssa is the characteristic feature in the tongue of  
 a) Ox      b) Goat      c) **Dog**

50. Which one of the following is named as Wolf tooth?  
a) 1<sup>st</sup> Molar                      b) 1<sup>st</sup> Canine                      c) 1<sup>st</sup> Premolar
51. Hardest tissue in the body is  
a) Enamel                      b) Bone                      c) Dentine
52. Substances that form the tooth from within outward are  
a) Pulp, Dentine, Cement, Enamel  
b) Pulp, Enamel, Dentine, Cement  
c) Pulp, Enamel, Cement, Dentine
53. Identify the Isognathus animal  
a) Dog                      b) Pig                      c) Ox
54. Identify the Anisognathus animal  
a) Ox                      b) Horse                      c) Dog
55. Infundibulum is filled up with  
a) Enamel                      b) Cement                      c) Pulp
56. Largest salivary gland in Horse  
a) Mandibular                      b) Maxillary                      c) Parotid
57. Infraorbital salivary gland is present in  
a) Dog                      b) Sheep                      c) Rabbit
58. Largest salivary gland of Ox is  
a) Parotid                      b) Sublingual                      c) Submaxillary
59. Musculo-membranous passage common to both digestive and respiratory systems  
a) Mouth                      b) Pharynx                      c) Larynx
60. Cavity of pharynx has ----- number of openings  
A) 7                      B) 8                      c) 4
61. -----openings are situated on the dorso anterior part of the pharynx  
a) Eustachian tube                      b) Posterior nares                      c) Auditus laryngis
62. Pharynx communicates with the tympanic cavity through  
a) Ductus incisivus                      b) Eustachian tube                      c) Wharton's duct
63. Pharyngeal diverticulum is present in  
a) Horse                      b) Pig                      c) Sheep

64. Ventral diverticulum of Eustachian tube in equidae family  
a) **Gutturhal pouch**    b) Pharyngeal diverticulum
65. At the level of 3<sup>rd</sup> thoracic vertebra the Oesophagus is situated on the -----  
-- face of trachea  
a) **Dorsal**    b) Lateral    c) Ventral
66. Atrium ventriculi is situated on the  
a) Reticular wall    b) Reticulo-omasal wall    c) **Rumino-reticular wall**
67. In the neck region Oesophagus is related dorsally to a straight muscle called  
a) Rectus capitis dorsalis    b) **Longus coli**    c) Intertransversales coli
68. Line of demarcation between thoracic and abdominal cavity is  
a) Diaphragm    b) **Pelvic inlet**    c) Tuber sacrale
69. In adult, the abdominal cavity is pierced by----- openings  
a) 3    b) **5**    c) 6
70. Diaphragm has ----- number of openings  
a) 2    b) 4    c) **3**
71. In male, Inguinal canal is for the passage of  
a) **Spermatic cord**    b) External pudic vessel    c) Mammary artery and vein
72. Serous membrane lining the abdominal cavity is  
a) Pleura    b) Parietal peritoneum    c) Visceral peritoneum
73. Double fold of peritoneum extends from stomach to other viscera is  
a) **Omentum**    b) Mesentery    c) Ligament
74. Double fold of peritoneum attaches intestine to the dorsal body wall is  
a) Ligament    b) **Mesentery**    c) Omentum
75. Double fold of peritoneum attaches viscera other than parts of the digestive tube to the abdominal wall is  
a) **Ligament**    b) Omentum    c) Mesentery
- 76 Which one of the following does not transmit blood vessels and nerves?  
a) Omentum    b) Mesentery    c) **Ligament**
77. Largest of the three body cavities  
a) Thoracic    b) **Abdominal**    c) Pelvic

78. Smallest of the three body cavities is  
a) Thoracic                      b) **Pelvic**                      c) Abdominal
80. Abdominal cavity is separated from the thoracic cavity by  
a) **Diaphragm**                      b) Pelvic inlet                      c) Ribs and intercostals muscles
81. Identify the correct answer:  
a) Pelvic cavity is devoid of peritoneal lining  
b) Anterior part of the pelvic cavity is retroperitoneal  
c) **Posterior part of the pelvic cavity is retroperitoneal**
82. Greater and lesser peritoneal sac communicates with each other through  
a) **Foramen of Winslow**                      b) Foramen cecum                      c) Foramen dextrum
83. Double fold of peritoneum extending from the visceral face of liver to the stomach is called  
a) Superficial omentum                      b) **Lesser omentum**                      c) Greater omentum
84. In male, genital fold contains  
a) Urinary bladder                      b) Epididymis and Vasdeferens  
c) **Vasdeferens and Seminal vesicles**
85. The Falciform ligament of liver contains in its free edge  
a) Umbilical artery                      b) **Umbilical vein**                      c) Hepatic vein
86. Largest compartment of the Ruminant stomach is  
a) Omasum                      b) **Rumen**                      c) Abomasum
87. Smallest compartment of the Ruminant stomach is  
a) **Reticulum**                      b) Omasum                      c) Abomasum
91. Match the following:
- |                |                           |
|----------------|---------------------------|
| i) Rumen       | -a) Honey comb appearance |
| ii) Omasum     | -b) True stomach          |
| iii) Reticulum | -c) Paunch                |
| iv) Abomasum   | -d) Many plie             |
- Identify the correct answer  
a) i-a, ii-d, iii-c, iv-b  
b) **i-c, ii-d, iii-a, iv-b**  
c) i-d, ii-a, iii-b, iv-c

92. Identify the correct answer

- a) Rumen and Reticulum are on the left side
- b) Rumen and Omasum are on the right side
- c) Rumen and Abomasum are on the left side

93. Identify the correct statement:

- a) Pelvic outlet is smaller than inlet
- b) Pelvic inlet is smaller than outlet
- c) Pelvic outlet is equal to inlet

94. The position of Rumen in Ox is from the

- a) Lower part of 7<sup>th</sup> / 8<sup>th</sup> intercostal space to Pelvic inlet
- b) Lower part of 4<sup>th</sup> / 5<sup>th</sup> intercostal space to Pelvic inlet
- c) Lower part of 7<sup>th</sup> / 8<sup>th</sup> intercostal space to Pelvic outlet

95. Ruminant stomach is divided into compartments exteriorly by

- a) Pillars
- b) Grooves
- c) Muscular ridges

96. The extremity of Rumen is divided into dorsal and ventral by means of

- a) Right longitudinal groove
- b) Left longitudinal groove
- c) Coronary groove

97. The most anterior compartment of the ruminant stomach is

- a) Rumen
- b) Omasum
- c) Reticulum

98. Reticulum is situated on the left side which extends from

- a) 8-10<sup>th</sup> rib
- b) 6-8<sup>th</sup> rib
- c) 7-9<sup>th</sup> rib

100. Omasum is situated on the right side which extends from

- a) 8-10<sup>th</sup> rib
- b) 6-8<sup>th</sup> rib
- c) 7-11<sup>th</sup> rib

101. Fundus reticuli lies opposite to the

- a) 6<sup>th</sup> rib
- b) 6<sup>th</sup> intercostal space
- c) 8<sup>th</sup> intercostal space

102. Anterior extremity of the abomasum is at the level of

- a) 8<sup>th</sup> rib
- b) 6<sup>th</sup> rib
- c) Xiphoid cartilage

103. Pyloric part of the abomasum is at the level of ventral part of

- a) 9<sup>th</sup> rib
- b) 11<sup>th</sup> rib
- c) 10<sup>th</sup> rib

104. Interiorly rumen is divided into compartments by

- a) Pillars
- b) Ridges
- c) Grooves

105. In Ox, Cardia is at the level of  
a) 11<sup>th</sup> rib    b) 13<sup>th</sup> rib    c) 8 or 9<sup>th</sup> rib
106. Oesophageal groove extends from the  
a) Cardia to Rumino-reticular opening  
b) Cardia to Reticulo-omasal opening  
c) Cardia to Omaso-abomasal opening
107. Sulcus omasi extends from the  
a) Reticulo-omasal opening to the Omaso-abomasal opening  
b) Rumino-reticular opening to the Omaso-abomasal opening  
c) Rumino-reticular opening to the Omaso-abomasal opening
108. Mucous membrane of the abomasum shows folds in the  
a) Glandular part only    b) Non-glandular part only  
c) Throughout the abomasums
109. Rounded cut-de-sac at the left dorsal extremity of the horse stomach is  
a) Saccus caecus    b) Fundus    c) Diverticulum ventriculi
110. Glandular and non-glandular parts of the Horse stomach is separated by  
a) Margoplicatus    b) Terminal line    c) Oesophageal groove
111. Which one of the following is not a simple stomach animal?  
a) Horse    b) Pig    c) Goat
112. A conical blind pouch in the left extremity of Pig stomach is  
a) Saccus caecus    b) Diverticulum ventriculi    c) Insula ruminis
113. Torus pyloricus is present in the stomach of  
a) Horse    b) Dog    c) Pig
114. Identify the correct statement of the two compartments of the Fowl stomach  
a) Proventriculus is glandular and Gizzard is non- glandular  
b) Proventriculus is non-glandular  
c) Gizzard is glandular
115. Fixed part of the small intestine is  
a) Jejunum    b) Ileum    c) Duodenum
116. Mesenteric part of the small intestine includes  
a) Duodenum and Jejunum    b) Jejunum and Ileum    c) Ileum and Duodenum

117. In Ox, pylorus is at the ventral end of the  
a) 10<sup>th</sup> rib    b) 12<sup>th</sup> rib    c) 13<sup>th</sup> rib
118. In Rabbit, the terminal part of the Ileum shows a dilatation called  
a) Saccus caecus    b) Sacculus rotundus    c) Torus pyloricus
119. Bile duct and Pancreatic ducts are double in  
a) Ox    b) Dog    c) Fowl
120. In Ox, which part of the large intestine is in the form of a cul-de-sac?  
a) Caecum    b) Colon    c) Rectum
121. Straight portion of the Large intestine within in the Pelvic cavity is  
a) Caecum    b) Colon    c) Rectum
122. In Cow immediately ventral to rectum it is related to  
a) Urinary bladder    b) Seminal vesicle    c) Uterus
123. Terminal point of the alimentary canal is  
a) Rectum    b) Anus    c) Colon
124. Peyer's patches are present in the mucous membrane of  
a) Caecum    b) Duodenum    c) Ileum
125. Muscle which controls the prolapse of the anus during defecation  
a) Sphincter ani    b) Suspensory ligament of anus    c) Retractor ani
127. Which one of the following species has a functional Caecum?  
a) Rabbit and Horse    b) Dog and Cat    c) Cattle and Sheep
128. Identify the foregut digester  
a) Ox    b) Horse    c) Rabbit
129. Identify the hind gut digester  
a) Horse    b) Cattle    c) Goat
130. In Horse caecum is situated on the  
a) Left side    b) Right side    c) Median
131. Which one of the following is the first part of colon in Horse?  
a) Right ventral    b) Right dorsal    c) Left ventral
132. Which part of the intestine is arranged in centripetal and centrifugal coils?  
a) Jejunum    b) Ileum    c) Colon

133. Identify the correct order of flexures formed by the greater colon from before backward

- a) Sternal flexure, Pelvic flexure, Diaphragmatic flexure
- b) Diaphragmatic flexure, Pelvic flexure, Sternal flexure
- c) Pelvic flexure, Diaphragmatic flexure, Sternal flexure

134. Taenia caeci and Taenia coli are present in

- a) Ox and Horse
- b) Horse and Dog
- c) Horse and pig

135. Number of Taeniae present on the ventral part of the greater colon is

- a) 3
- b) 4
- c) 2

136. Number of Taeniae present on the small colon is

- a) 4
- b) 3
- c) 2

137. Haustra are present in the -----part of intestine

- a) Colon
- b) Duodenum
- c) Caecum

138. In horse, on rectal palpation which one can be palpated?

- a) Sternal flexure
- b) Pelvic flexure
- c) Diaphragmatic flexure

139. Which one of the following has the smallest diameter?

- a) Diaphragmatic flexure
- b) Sternal flexure
- c) Pelvic flexure

140. Area of right ruminal wall between the dorsal and ventral branches of right longitudinal pillar is called

- a) Recess of rumen
- b) Saccus calcus
- c) Insula ruminis

141. Franulum ilei is present in

- a) Horse
- b) Fog
- c) Pig

142. Sacculations present in the colon of horse and pig are called

- a) Haustra
- b) Talnia
- c) Muscular bands

143. Caeca is double in

- a) Horse
- b) Pig
- c) Fowl

144. The most caudal segment of the Cloaca is

- a) Urodeum
- b) Proctodeum
- c) Coprodeum

145. Cloacal bursa is situated on the dorsal wall of the

- a) Proctodeum
- b) Coprodeum
- c) Urodeum

146. Horizontal slit like opening of the proctodeum



- a) Anus      b) **Vent**      c) Cloaca
147. Which one of the following animal has vermiform appendix?  
a) Ox      b) Horse      c) **Rabbit**
148. Largest gland in the body of mammals  
a) Mammary gland      b) **Liver**      c) Kidney
149. Position of liver in Ox  
a) **From lumbo-costal angle to the 8<sup>th</sup> rib on right side**  
b) From lumbo-costal angle to the 8<sup>th</sup> rib on left side  
c) From lumbo-costal angle to the 6<sup>th</sup> rib on left side
150. In Horse liver is situated on the  
a) Right side      b) Left side      c) **From right to left**
151. Right kidney is attached to the liver on its  
a) Anterior border      b) **Dorsal border**      c) Medial border
152. Right kidney is attached to the caudate lobe of the liver by  
a) Right lateral ligament      b) **Caudate ligament**      c) Falciform ligament
153. Falciform ligament extends from the  
a) Right border to left border  
b) **Umbilical fissure to Oesophageal notch**  
c) Right border to Oesophageal notch
154. Which one of the following is embedded with in the liver?  
a) Anterior vena cava      b) Celiac vein      c) **Posterior vena cava**
155. In Ox, gall bladder is in contact with the abdominal wall at the level of  
a) **10<sup>th</sup> / 11<sup>th</sup> intercostal space**      b) 13<sup>th</sup> rib      c) 7<sup>th</sup> / 8<sup>th</sup> intercostal space
156. Ductus choledocus is formed by the union of  
a) **Cystic and Hepatic ducts**  
b) Hepatic and Pancreatic ducts  
c) Cystic and Pancreatic ducts
157. Number of lobes present in the liver of Horse is  
a) 2      b) **3**      c) 5
158. In Ox, the free border of the Falciform ligament carries the  
a) **Round ligament**      b) Caudate ligament      c) Right lateral ligament

159. Gall bladder is absent in

- a) Ox          b) Pig          c) **Horse**

160. In Pig, the bile duct opens at the

- a) Diverticulum duodeni          b) **Papilla duodeni**          c) Torus pyloricus

161. The order of lobes of liver in dog from right to left are

- a) **Right lateral, Right central, Caudate, Left central and Left lateral**  
 b) Right lateral, Caudate, Right central, Left central and Left lateral  
 c) Right lateral, Right central, Left central, Caudate and Left lateral

162. Largest lobe of the dog liver is

- a) Right lateral          b) **Left lateral**          c) Caudate

163. In dog liver, gall bladder is lodged in the

- a) Right lateral          b) **Right central**          c) Caudate

164. Number of lobes in the rabbit liver are

- a) 6          b) 4          c) **5**

165. Which one of the following is otherwise known as abdominal salivary gland?

- a) Liver          b) Spleen          c) **Pancreas**

166. Largest lymphoid organ in the body

- a) Liver          b) Adrenal          c) **Spleen**

167. Match the following:

- | A                 | B                              |
|-------------------|--------------------------------|
| i) Spleen-Ox      | -a) Falciform/Human foot print |
| ii) Spleen –Horse | -b) Elliptical                 |
| iii) Spleen-Sheep | -c) Spatula shaped             |
| iv) Spleen-Rabbit | -d) Scythe shaped              |
| v) Spleen-Dog     | -e) Oyster-shell shaped        |

Identify the correct answer

- a) i-e, ii-d, iii-b, iv-c, v-a  
 b) **i-b, ii-d, iii-e, iv-c, v-a**  
 c) i-a, ii-b, iii-e, iv-d, v-s

1. Nasal cavity is separated from the oral cavity by means of

- a) **Hard palate**      b) Soft palate      c) Nasal septum

6. Match the following:

- | A                      | B                     |
|------------------------|-----------------------|
| i) Posterior nares     | -a) Organ of Jacobson |
| ii) Vomero-nasal organ | -b) Snout-pig         |
| iii) Ductus incisivus  | -c) Choanae           |
| iv) Pseudonostril      | -d) Nasopalatine duct |
| v) Osrostri            | -e) Horse             |

Identify the correct answer

- a) i-a, ii-d, iii-b, iv-c  
 b) i-a, ii-b, iii-c, iv-d  
 c) **i-c, ii-a, iii-d, iv-b**

7. Comma shaped nostrils are present in

- a) Ox      b) Horse      c) **Dog**

8. In Pig, burrowing (or) rooting habit is facilitated by

- a) Dental pad      b) **Rostrum**      c) Tusk

9. Horny skin covering the dorsal border of the nostrils in Fowl is called as

- a) Wattle      b) **Operculum**      c) Syrinx

10. Valvular apparatus of the respiratory system is

- a) Nose      b) Pharynx      c) **Larynx**

11. Which one of the Laryngeal cartilage is paired?

- a) Cricoid      b) **Arytenoid**      c) Thyroid

13. Laryngeal prominence is present on the ventral aspect of

- a) Cricoid      b) Arytenoid      c) **Thyroid cartilage**

15. Joints formed by the cartilages of the larynx in Ox are

- a) Syndesmoses      b) **Diarthrodial**      c) Amphiarthrodial

16. Portion of larynx between the vocal folds is named as

- a) **Rimaglottidis**      b) Vestibule      c) Laryngeal saccule

17. Joints formed by the cartilages of the larynx in Horse are  
a) Syndesmoses      b) Amphiarthrodial      c) **Diarthrodial**
18. Thyroid cartilage of larynx is incomplete ventrally in  
a) Ox      b) Dog      c) **Horse**
19. False vocal cords are absent in  
a) Ox      b) Dog      c) **Pig**
20. Organ of voice in Fowl is  
a) Larynx      b) **Syrinx**      c) Carina
21. In birds, homologous part of the vocal folds are  
a) Carina      b) **Tympaniform membrane**      c) Cricoid
22. Organ of voice in elephant is  
a) Larynx      b) **Trunk**      c) Syrinx
23. In the cervical region trachea is dorsally related to  
a) **Oesophagus**      b) Carotid artery      c) Vagosympathetic nerve
24. Tracheal bifurcation takes place at the level of  
a) **5<sup>th</sup> rib**      b) 3<sup>rd</sup> rib      c) 6<sup>th</sup> rib
25. Apical bronchus arises at the level of  
a) **3<sup>rd</sup> rib**      b) 5<sup>th</sup> rib      c) 6<sup>th</sup> rib
27. Bronchus is related to the  
a) **Bronchial artery above and Pulmonary artery below**  
b) Pulmonary artery above and Bronchial artery below  
c) Bronchial and Pulmonary artery above
28. In which one of the following Apical bronchus is absent?  
a) Dog      b) Ox      c) **Horse**
29. Posterior wall of the thoracic cavity is formed by  
a) Sternum      b) **Diaphragm**      c) Intercostal muscles
30. Pleura covering the lung is named as  
a) Costal pleura      b) Diaphragmatic pleura      c) **Pulmonary pleura**
31. Plica vena cava encloses  
a) **Posterior venacava**      b) Anterior venacava      c) Left phrenic nerve

33. Proportion of lung lobes in right to left lung is  
a) 3:3      b) 3:4      c) **4:3**
34. Accessory lobe is present in  
a) **Right lung only**      b) Left lung only      c) Both right and left lungs
35. Largest lobe of the Ox lung is  
a) Apical      b) Cardiac      c) **Diaphragmatic**
36. Lobation is absent in the lungs of  
a) **Horse and dog**      b) Ox and Horse      c) Sheep and Pig
37. Diaphragm is absent in  
a) Dog      b) Sheep      c) **Birds**
38. Air sacs are the unique feature in the respiratory system of  
a) Dog      b) Sheep      c) **Birds**
39. Number of air sacs in the respiratory system of Fowl are  
a) 13 pairs      b) 10 pairs      c) **11 pairs**
40. Which one of the following air sac is not paired?  
a) Cervical      b) Axillary      c) **Clavicular**
41. In Dog Thyroid gland extends from  
a) **Larynx to 7<sup>th</sup> tracheal ring**  
b) Larynx to 5<sup>th</sup> tracheal ring  
c) Larynx to 2<sup>nd</sup> tracheal ring
42. In sheep and Goat thyroid gland extends upto the lateral sides of  
a) 2<sup>nd</sup> tracheal ring      b) 7<sup>th</sup> tracheal ring      c) **5<sup>th</sup> tracheal ring**
43. Number of Parathyroid glands in Ox is  
a) **2 pairs**      b) 2 pairs      c) 3 pairs
1. Surface of the Kidney is lobulated in  
a) Horse      b) **Ox**      c) Dog
2. In which of the following organ right kidney is attached  
a) **Liver**      b) Spleen      c) Stomach
3. Apex of the Renal pyramid is known as  
a) Area cribrosa      b) **Renal papilla**      c) Calyx major

4. Match the following:

A

- i) Renal crest
- ii) Heart of playing card
- iii) Ruminal surface
- iv) Cicatrix

B

- a) Right kidney of horse
- b) Left kidney of Ox
- c) Vestige of Urachus
- d) Kidney – Horse

Identify the correct answer

- a) i-d ii-c iii-b iv-a
- b) i-d ii-a iii-b iv-c**
- c) i-c ii-a iii-b iv-d

5. Trigonum vesicae shows the openings of

- a) **2 Ureteral openings anteriorly and internal urethral orifice posteriorly**
- b) 2 Ureteral openings posteriorly and internal urethral orifice anteriorly
- c) 2 Ureteral openings alone

6. After birth, Umbilical artery is transformed into

- a) Lateral ligament of bladder
- b) Broad ligament
- c) Round ligament of bladder**

1. In Bull, scrotum is situated

- a) **Infront of the inguinal region**
- b) In the inguinal region

c) Subanal in position

2. Match the following:

A

- i) Intercolumnar fascia
- ii) Cremasteric fascia
- iii) Infundibuliform fascia
- iv) Tunica vaginalis

B

- a) Internal oblique muscle
- b) Parietal peritoneum
- c) External oblique muscle
- d) Transverse abdominis

Identify the correct answer:

- a) i-c ii-a iii-d iv-b
- b) i-c ii-a iii-d iv-b**
- c) i-b ii-a iii-d iv-c

3. In Stallion, rudimentary teats are situated  
a) Behind the scrotum    b) Infront of the scrotum    c) **At the preputial orifice**
4. Testicles are intraabdominal in position in  
a) Ox and Elephant    b) Stallion and Donkey    c) **Fowl and Elephant**
5. In Bull, relationship between the long axis of the testis and the long axis of the body is  
a) Horizontal    b) **Vertical**    c) Parallel
6. Position of epididymal border in Bull is  
a) Anterior    b) **Posterior**    c) Dorsal
8. Which one of the following is not included in the Spermatic cord?  
a) Spermatic artery    b) Vas deferens    c) **Epididymis**
9. Testicles are globular in shape in  
a) Bull    b) Pig    c) **Stallion**
10. In Stallion, relationship between the long axis of the testes and the long axis of the body is nearly  
a) Vertical    b) **Parallel**    c) Horizontal
11. In the testis of Dog, epididymis is attached on its  
a) Anterior border    b) Ventral border    c) **Dorsal border**
12. In Pig, tail of the epididymis is attached to the testis on its  
a) Anterior end    b) **Posterior end**    c) Dorsal
13. Pampiniform plexus is made up of  
a) Internal spermatic artery    b) Internal spermatic nerve  
c) **Internal spermatic vein**
14. During foetal life, testes are attached to the sublumbar region by  
a) **Mesorchium**    b) Mesentery    c) Peritoneum
15. During testicular descent, the testes are guided by  
a) Ligamentum epididymis    b) **Gubernaculum testis**  
c) Scrotal ligament
16. After birth, Gubernaculum testis is transformed into  
a) **Dartos**    b) Tunica vaginalis    c) Tunica albuginea
17. In Pig, descent of testis is complete  
a) 3 months after birth    b) At the time of birth    c) **Shortly before birth**

18. In which one of the following species, vas deferens is non-tortuous?  
a) Rabbit      b) Dog      c) **Horse**
20. Uterus masculinus is an fetal remnant of  
a) Wolfian duct      b) **Multerian duct**      c) Paramcsonephric tubules
21. Utriculus prostaticus in male is the homologus part of  
a) Uterus      b) Ovary      c) **Uterus and vagina**
22. Which one of the following is not an accessory sex gland?  
a) Seminal vesicle      b) Cowpers gland      c) **Palatine gland**
23. The only accessory sex gland in Dog is  
a) Seminal vesicle      b) **Prostate**      c) Cowpers gland
24. Accessory sex gland lies on the neck of the urinary bladder  
a) Cowpers gland      b) **Prostate**      c) Seminal vesicle
25. Sex gland situated at the Ischial arch is  
a) Seminal vesicle      b) Prostate      c) **Bulbo-urethral gland**
26. In Bull, cowpers gland is surrounded by  
a) **Bulbocavernosus muscle**      b) Urethralis muscle      c) Bulbo spongiosus muscle
27. Rounded prominence situated on the dorsal wall of the urethra is  
a) Processus urethral      b) **Colliculus seminalis**      c) Urethral crest
29. In which of the following species the terminal part of urethra extends beyond the glans penis as processus urethrae?  
a) Bull      b) Stallion      c) **Sheep**
30. Fibrous type of penis is present in  
a) **Bull**      b) Stallion      c) Donkey
31. In boar the volume of semen is mainly contributed by the secretion of  
**a) Seminal vesicle**      b) Prostate      c) Cowpers
32. Largest accessory sex gland in Dog  
a) **Prostate**      b) Seminal vesicle      c) Cowpers
33. Penis of stallion is of-----type  
a) Fibrous      b) **Cavernous**      c) Intermediate
34. Free margin of the glans penis in Stallion is named as  
a) Fossa glandis      b) Collum glandis      c) **Corona glandis**



35. In Stallion, smegma is accumulated in

- a) Fossa glandis      b) Corona glandis      c) Urethral sinus

36. Sigmoid flexure is formed in the

- a) Body of penis      b) Root of penis      c) Glans penis

37. Sigmoid flexure is the characteristic feature in the penis of

- a) Dog and Cat      b) Cattle and Horse      c) Cattle and Pig

38. Match the following:

A

B

- |                                  |              |
|----------------------------------|--------------|
| i) Pars libera                   | -a) Bull     |
| ii) Preputial diverticulum       | -b) Pig      |
| iii) Pre scrotal sigmoid flexure | -c) Stallion |
| iv) Post scrotal sigmoid flexure | -d) Rabbit   |

Identify the correct answer:

- a) i-d ii-c iii-b iv-a  
 b) i-d ii-b iii-c iv-a  
 c) i-d ii-c iii-a iv-b

39. Position of the ovaries in domestic animals

- a) Inside the pelvic cavity      b) Intra abdominal      c) Brim of the pelvic cavity

40. Ovulatory fossa is present on the surface of the ovary of

- a) Cow      b) Mare      c) Sow

41. Ovarian bursa is present in the ovary of

- a) Bitch      b) Rabbit      c) Sow

42. Opening of the infundibulum is covered by numerous

- a) Cilia      b) Fimbriae      c) Muscular folds

43. Identify the order of sequence of different segments of the birds oviduct

- a) Infundibulum, Magnum, Isthmus, Uterus and Vagina  
 b) Infundibulum, Isthmus, Magnum, Uterus and Vagina  
 c) Infundibulum, Uterus, Isthmus, Magnum and Vagina

44. Longest segment in the oviduct of Hen

- a) Uterus      b) Magnum      c) Isthmus

45. Shell of an egg is secreted in which part of the oviduct in Fowl  
a) Magnum    b) Infundibulum    c) **Uterus**
46. Oviposition takes place in-----part of the oviduct of Hen  
a) Uterus    b) Magnum    c) **Vagina**
47. Sperm host glands are present at the junction of  
a) **Uterus and Vagina**    b) Uterus and Magnum    c) Magnum and Isthmus
48. Uterus is attached to the lateral body wall by  
a) Sacrosciatic ligament    b) **Broad ligament**    c) Sacroiliac ligament
50. Fallopian tube opens into the horn of the uterus through  
a) **Ostium uterinum tubae**    b) External os    c) Internal os
51. Oval prominences of the mucous membrane lining the uterus are called  
a) **Caruncles**    b) Cotyledons    c) Placentomes
52. Identify the correct statement  
a) Mucous membrane of the cervix has Serous glands  
b) Mucous membrane of the cervix has Mucous glands  
c) **Mucous membrane of the cervix has no glands**
53. Cotyledons are absent in the Mucous membrane of the uterus of  
a) Cow    b) Sheep    c) **Mare**
55. Glans clitoridis is more prominent in  
a) **Mare**    b) Cow    c) Sheep
56. Base of the mammary gland is attached to the abdominal wall by means of  
a) Stay apparatus    b) **Suspensory apparatus**    c) Prepubic tendon
57. Which one of the following is a paired muscle?  
a) Urethralis    b) Bulbospongiosus    c) **Ischiocavernosus**
58. Match the following:
- |                                      |                |
|--------------------------------------|----------------|
| i) Helicine arteries                 | -a) Penis-Dog  |
| ii) Os penis                         | -b) Horse      |
| iii) Musculocavernous penis          | -c) Erection   |
| iv) Vagina simplex and Uterus duplex | -d) Marsupials |
| v) Vagina and Uterus duplex          | -e) Rabbit     |

Identify the correct answer

a) i-c ii-d iii-a iv-b v-e

b) i-c ii-a iii-b iv-e iv-d

c) i-e ii-a iii-d iv-c iv-b

59. Uterus bicornis is present in

a) Rabbit b) Marsupials c) Domestic animals

60. Pelvic outlet is larger than the Pelvic inlet in

a) Cow b) Mare c) Bitch

61. Serous membrane covering the uterus is

a) Perimetrium b) Endometrium c) Myometrium

62. Cryptorchidism is more common in

a) Pigs b) Sheep c) Cattle

63. Uterus masculinus is an embryological remnant of

a) Mesonephric ducts b) Wolffian duct c) Paramesonephric ducts

66. Part of ruminant stomach involved in Traumatic gastritis is

a) Rumen b) Reticulum c) Omasum

**VETERINARY BIOCHEMISTRY**

1. The end product of purine metabolism in cattle is  
a) Urea            b) Uric acid            c) Allantoin            d) Ammonia
2. Which one of the following is a purely Ketogenic amino acid?  
a) Leucine            b) Glycine            c) Valine            d) Glutamic acid
3. Guanase enzyme activity is deficient in the liver of  
a) Pigs            b) Dogs            c) Cats            d) Cattle
4. The source of N<sub>1</sub> of pyrimidine ring is  
a) Glycine            b) Glutamine            c) Aspartate            d) N<sup>10</sup> methylene TH<sub>4</sub>
5. Liver cannot utilize ketone bodies because it lacks the enzyme  
a) Thiokinase            b) β- keto thiolase            c) Thiophorase            d) Thioesterase
6. Which one of the following amino acid does not undergo transamination reaction?  
a) Glycine            b) Lysine            c) Alanine            d) Aspartate
7. HbA1C measurements indicate average B. glucose levels over the preceding  
a) 2 days            b) 2 weeks            c) 2 months            d) 2 years
8. Which among the following is a hypoglycemic hormone?  
a) Glucagon            b) Cortisol            c) Nor Adrenaline            d) Insulin
9. Hypercholesterolemia is a common feature in  
a) Hyperthyroidism            b) Hypothyroidism            c) Hyperinsulinism            d) Gout
10. Hypogammaglobulinemia in calves is detected by \_\_\_\_\_ test.  
a) GTT            b) BCG method            c) Rothera's            d) Glutaraldehyde coagulation
11. The enzyme involved in m-RNA synthesis in Eukaryotes is  
a) RNA pol I            b) RNA pol II            c) RNA pol III            d) DNA pol III
12. Glucuronic acid conjugation is limited in \_\_\_\_\_.  
a) Cats            b) Dogs            c) Pigs            d) Horses
13. Induced fit model was given by  
a) Michaelis-Menten            b) Sutherland            c) D. Koshland            d) Fischer

14. One I.U equals to  
a) 16.67 nmoles      b) 16.67 nkatal      c) 1.667 nmoles      d) 1.667 nkatal
15. Xanthine oxidase requires \_\_\_\_\_ as co-factor  
a) Mo<sup>2+</sup>      b) Mg<sup>2+</sup>      c) Zn<sup>2+</sup>      d) Ca<sup>2+</sup>
16. The optimum pH for pepsin is  
a) 1.5      b) 6.0      c) 7.4      d) 8.4
17. The optimum temperature for most of the mammalian enzymes is  
a) 60°C      b) 42°C      c) 37°C      d) 25 °C
18. Attachment of a purine base to ribose sugar occurs via \_\_\_\_\_ atom.  
a) N-1      b) C- 3      c) N- 9      d) C- 9
19. Absorbance maxima of Nucleic acids is mainly contributed by -  
a) Sugar      b) Phosphates      c) Bases      d) Hydroxyl groups
20. The Number of base pairs per turn of helix in 'A' form of DNA is -  
a) 10      b) 10.5      c) 11      d) 12
21. Which of the following RNA has a relatively short half life?  
a) r- RNA      b) m-RNA      c) t-RNA      d) Micro RNAs
22. The concept that "DNA carries the genetic information" was given by  
a) Singer & Nicolson      b) Watson & Crick  
c) Avery, Macleod & McCarty      d) Franklin & Wilkins
23. The chemical agent used in Fischer-Kiliani synthesis is  
a) HCl      b) HCN      c) H<sub>2</sub>O<sub>2</sub>      d) Hydroxyl amine
24. Which of the following is a Deoxy sugar  
a) Ribose      b) Fucose      c) Lactose      d) Mannose
25. An example for a Non- reducing disaccharide is  
a) Lactose      b) Trehalose      c) Maltose      d) Cellobiose
26. Bacterial cell wall polysaccharide has the following sugar component  
a) NANA      b) NAMA      c) Chitin      d) Dextran

27. Lactose produces characteristic \_\_\_\_\_ shaped Osazone crystals  
a) Hedge hog    b) Sunflower petals    c) Rhombic rods    d) Badminton ball
28. Enzyme –Substrate(ES) complex model was given by  
a) Michaelis-Menten    b) Sutherland    c) D. Koshland    d) J.Sumner
29. The ratio of salt to acid in phosphate buffer system is  
a) 1:20    b) 1:4    c) 20:1    d) 4:1
30. The physiological pH of human plasma is  
a) 5.4    b) 6.4    c) 7.4    d) 8.4
31. The number of possible stereoisomers for Glucose (C<sub>6</sub>) is  
a) 6    b) 8    c) 16    d) 32
32. Identify the Non-diffusible ion -  
a) Na<sup>+</sup>    b) K<sup>+</sup>    c) Cl<sup>-</sup>    d) Protein<sup>-</sup>
33. The ratio of salt to acid in bicarbonate buffer -  
a) 20:1    b) 4:1    c) 6:1    d) 3:1
34. By Kiliani – Fischer synthesis, D-Glucose can be synthesized from –  
a) D-Ribulose    b) D- Xylulose    c) D- Arabinose    d) D-Ribose
35. Which of the following contains β-glycosidic linkage?  
a) Glycogen    b) Cellulose    c) Heparin    d) Starch
36. The structure of the cell membrane is described as -  
a) Bilipid layer    b) Biprotein layer    c) Bicarbohydrate layer    d) Glycoprotein layer
37. Which of the following does not have any optical stereoisomer?  
a) Fructose    b) Xylulose    c) Dihydroxyacetone    d) Erythrulose
38. Identify the “GAG” that acts as lubricant in joints -  
a) Heparin    b) Hyaluronic acid    c) Chondroitin -4 SO<sub>4</sub>    d) Glycogen
39. The breakdown product of starch is –  
a) Dextrins    b) Dextran    c) Dextrose    d) Dextra-amine
40. Invert Sugar is –  
a) Lactose    b) Maltose    c) Sucrose    d) Glucose
41. In sphingomyelins the alcohol is -  
a) Glycerol    b) Cetyl alcohol    c) Glycol    d) Sphingosine

42. Respiratory distress syndrome is due to the deficiency of -  
a) Dipalmitoyl Lecithin    b) Cholesterol    c) Dipalmitoyl Cephalin    d) Lysolecithin
43. Gangliosides are the Glycolipids present in -  
a) Liver                      b) Brain                      c) Kidney                      d) Muscle
44. The 'Bad Cholesterol' is -  
a) VLDL            b) LDL            c) HDL                      d) Chylomicrons
45. Thromboxanes promote -  
a) Blood Clotting    b) Vasodilation    c) Uterine Contraction    d) Bleeding
46. Pick the odd one out -  
a) Glycine                      b) Methionine                      c) Cysteine                      d) Cystine
47. The non- protein part of a conjugated protein is called  
a) Prosthetic group    b) Amino group    c) Anomeric group    d) Oligomeric group.
48. The aromatic amino acids absorb maximum amount of light at -  
a) 260 nm                      b) 280 nm                      c) 450 nm                      d) 600 nm
49. The 3-D structure of Hemoglobin was discovered by -  
a) Watson & Crick    b) Max F Perutz    c) John C Kendrew    d) GN Ramachandran
50. The stable  $\alpha$ -helix formed by a polypeptide, made up of only D-amino acids will be -  
a) Left-handed                      b) Right- handed                      c) Both                      d) None of the above
51. Left handed helical DNA is  
a) B – DNA                      b) A- DNA                      c) Z- DNA                      d) mt- DNA
52. The number of base pairs in 'Z' form of DNA is –  
a) 10                      b) 10.5                      c) 11                      d) 12
53. Attachment of pyrimidine base to ribose sugar occurs through \_\_\_\_\_ atom  
a) N-1                      b) C-3                      c) N-9                      d) C-1
54. The energy currency of the cell –  
a) ATP                      b) Glucose                      c) Glycogen                      d) Fat
55. Protein synthesis occurs in –  
a) Lysosomes                      b) Golgi apparatus                      c) Ribosomes                      d) Nucleus

56. Glucose upon oxidation with concentrated  $\text{HNO}_3$  will give  
a) Gluconic acid b) Glucuronic acid c) Glucosaccharic acid d) None of the above
57. Iodine test gives pink color with  
a) Glycogen b) Starch c) Dextrin d) Cellulose
58. Which among the following is a basic amino acid?  
a) Aspartic acid b) Asparagine c) Leucine d) Lysine
59. The first protein for which the tertiary structure was discovered is  
a) Insulin b) Myoglobin c) Hemoglobin d) Silk fibroin
60. The DNA having 10.5 base-pairs per helix is  
a) B – DNA b) A- DNA c) Z- DN d) mt- DNA
61. Which among the following is a Purine base?  
a) Thymine b) Thiamine c) Guanine d) Cytosine
62. Identify the nucleotide -  
a) Adenosine b) Guanine c) ATP d) Cytosine
63. The typical structure of t-RNA is described as –  
a) Double helix b) Clover-leaf c) Triple helix d)  $\beta$ -sheets
64. Which among the following acts as a surfactant in Lung?  
a) Lecithin b) Cardiolipin c) Cephalins d) Triacylglycerol
65. The parent compound for bile acids is  
a) Arachidonic acid b) Stearic acid c) Cholesterol d) Acetic acid
66. The 'Good Cholesterol' is  
a) VLDL b) LDL c) HDL  
d) Chylomicrons
67. Which among the following is a glycolipid?  
a) Keratin b) Cephalin c) Cerebroside d) Cholesterol
68. Which among the following is a acidic amino acid?  
a) Aspartic acid b) Asparagine c) Leucine d) Lysine



69. The first protein for which the primary structure was discovered is  
a) Insulin            b) Myoglobin            c) Hemoglobin            d) Silk fibroin
70. The 'suicidal bags' of the cell is  
a) Mitochondria            b) Lysosomes            c) Ribosomes            d) Peroxisomes
71. Iodine test gives violet color with  
a) Starch            b) Glycogen            c) Dextrin            d) Cellulose
72. The odd chain fatty acid among the following is  
a) Propionic acid            b) Acetic acid            c) Butyric acid            d) Stearic acid
73. Which among the following is a C<sub>16</sub> monounsaturated fatty acid?  
a) Oleic acid            b) Linoleic acid            c) Linolenic acid            d) Palmitoleic acid
74. Sulfur containing amino acid among the following is  
a) Arginine            b) Asparagine            c) Cysteine            d) Lysine
75. Identify the nonstandard amino acid  
a) Alanine            b) Ornithine            c) Proline            d) Histidine
76. Which of the following DNA is a left handed helix?  
a) B-DNA            b) A-DNA            c) Z-DNA            d) mt-DNA
77. Nucleic acids have an absorption maxima ( $\lambda_{max}$ ) at  
a) 260 nm            b) 280 nm            c) 360 nm            d) 380 nm
78. 5-methyl Uracil is otherwise known as  
a) Adenine            b) Guanine            c) Thymine            d) Cytosine
79. Carbonic anhydrase requires \_\_\_\_\_ as a co-factor  
a) Mo<sup>2+</sup>            b) Mg<sup>2+</sup>            c) Zn<sup>2+</sup>            d) Ca<sup>2+</sup>
80. Chemi-osmotic hypothesis was given by  
a) Peter Mitchell            b) F.Knoop            c) Hans Krebs            d) Paul Boyer
81. Which among the following is a Physiological uncoupler?  
a) DNP            b) Cyanide            c) Thermogenin            d) BAL
82. Glycerol -3-phosphate shuttle operates in  
a) Heart            b) Kidney            c) Liver            d) Skeletal muscles

83. No. of ATPs produced when acetyl CoA is oxidised via TCA cycle is \_\_\_\_.
- a) 10            b) 15            c) 30            d) 32
84. Fatty acid biosynthesis occurs in
- a) Mitochondrial matrix   b) Lysosomes    c) Cytoplasm   d) Peroxisomes
85. Which of the following is a thioester compound?
- a) Acetyl CoA    b) Coenzyme A   c) Acetoacetate   d) Glutathione
86. The nucleotide involved in Glycogenesis is
- a) ATP            b) GTP            c) CTP            d) TTP
87. The number of NADH<sub>2</sub> produced in glycolysis is
- a) 4                b) 3                c) 2                d) 1
88. Carnitine is required for the transport of \_\_\_\_\_.
- a) Malate        b) Pyruvate      c) Fatty acids    d) Amino acid
89. All Kinase enzymes require \_\_\_\_\_ as their co factor
- a) Magnesium   b) Manganese   c) Nickel        d) Molybdenum
90. Which one of the following is associated with bad cholesterol?
- a) HDL            b) LDL            c) VLDL            d) Chylomicrons
91. The end product of purine metabolism in Cattle is
- a) Urea            b) Uric acid      c) Allantoin      d) Ammonia
92. The source of N<sub>9</sub> of purine ring is
- a) Glutamine    b) Glycine        c) Aspartate      d) N<sup>5</sup>,N<sup>10</sup> methylene TH<sub>4</sub>
93. The lipoprotein which is involved in reverse cholesterol transport is
- a) HDL            b) LDL            c) VLDL            d) Chylomicrons
94. Lipase requires \_\_\_\_\_ as a co-factor.
- a) Mo<sup>2+</sup>            b) Mg<sup>2+</sup>            c) Zn<sup>2+</sup>            d) Ca<sup>2+</sup>
95. The lipid soluble mobile electron carrier in ETC is
- a) Cyt C            b) Co-enzyme Q   c) Cyt bc1        d) Oxygen
96. HMP pathway takes place in
- a) Mitochondrial matrix   b) Lysosomes    c) Cytoplasm    d) Peroxisomes

97. The number of FADH<sub>2</sub> produced in TCA cycle is  
a) 4                      b) 3                      c) 2                      d) 1
98. Which one of the following is associated with Apo B100 ?  
a) HDL                      b) LDL                      c) VLDL                      d) Chylomicrons
99. Among domestic animals, Hyperinsulinism is most commonly reported in  
a) Horses                      b) Dogs                      c) Pigs                      d) Cats
100. Which among the following is a negative acute phase protein ?  
a) Ceruloplasmin                      b) Serum amyloid A                      c) Protein C                      d) Albumin
101. The Clearance test which is used for measuring Glomerular filtration rate.  
a) Urea                      b) PAH                      c) Inulin                      d) Diodrast
102. The major site of plasma protein synthesis is  
a) Liver                      b) Intestines                      c) Kidneys                      d) Pancreas
103. The preferred anticoagulant for blood glucose estimation is  
a) EDTA                      b) Sodium fluoride                      c) Heparin                      d) Sodium Citrate
104. Rothera's test is routinely used in the diagnosis of  
a) Alkalosis                      b) Milk fever                      c) Ketosis                      d) Jaundice

## Answer key

1. c) Allantoin	51. c) Z- DNA
2. a) Leucine	52. d) 12
3. a) Pigs	53. a) N-1
4. c) Aspartate	54. a) ATP
5. c) Thiophorase	55. c) Ribosomes
6. b) Lysine	56. c) Glucosaccharic acid
7. c) 2 months	57. a) Glycogen
8. d) Insulin	58. d) Lysine
9. b) Hypothyroidism	59. b) Myoglobin
10. d) Glutaraldehyde coagulation	60. a) B – DNA
11. b) RNA pol II	61. c) Guanine
12. a) Cats	62. c) ATP
13. c) D. Koshland	63. b) Clover-leaf
14. b) 16.67 nkatal	64. a) Lecithin
15. a) Mo 2+	65. c) Cholesterol
16. a) 1.5	66. c) HDL
17. c) 37°C	67. c) Cerebroside
18. c) N- 9	68. a) Aspartic acid
19. c) Bases	69. a) Insulin
20. c) 11	70. b) Lysosomes
21. b) m-RNA	71. a) Starch
22. c) Avery, Macleod & McCarty	72. a) Propionic acid
23. b) HCN	73. d) Palmitoleic acid
24. b) Fucose	74. c) Cysteine
25. b) Trehalose	75. b) Ornithine
26. b) NAMA	76. c) Z- DNA
27. d) Badminton ball	77. a) 260 nm
28. a) Michaelis-Menten	78. c) Thymine

29. d) 4:1	79. c) $Zn^{2+}$
30. c) 7.4	80. a) Peter Mitchell
31. c) 16	81. c) Thermogenin
32. d) Protein <sup>-</sup>	82. d) Skeletal muscles
33. a) 20:1	83. a) 10
34. d) D-Ribose	84. c) Cytoplasm
35. b) Cellulose	85. b) Coenzyme A
36. a) Bilipid layer	86. c) CTP
37. c) Dihydroxyacetone	87. c) 2
38. b) Hyaluronic acid	88. c) Fatty acids
39. a) Dextrins	89. a) Magnesium
40. c) Sucrose	90. b) LDL
41. d) Sphingosine	91. c) Allantoin
42. a) Dipalmitoyl Lecithin	92. a) Glutamine
43. b) Brain	93. a) HDL
44. b) LDL	94. d) $Ca^{2+}$
45. a) Blood Clotting	95. b) Co-enzyme Q
46. a) Glycine	96. c) Cytoplasm
47. a) Prosthetic group	97. d) 1
48. b) 280 nm	98. b) LDL
49. b) Max F Perutz	99. b) Dogs
50. a) Left-handed	100. d) Albumin
	101. c) Inulin
	102. a) Liver
	103. b) Sodium fluoride
	104. c) Ketosis

**VETERINARY OBSTETRICS AND GYNAECOLOGY****Veterinary Gynaecology**

- 1 The length of the estrus cycle in ewes is ( )  
 a. 16 days b. 18 days  
 c. 20 days d. None of these
- 2 Induced ovulation occurs in ( )  
 a. Cat b. Rabbit  
 c. Ferrets d. All the above
- 3 Gestation length in a buffalo is about ( )  
 a 285 days b 222 days  
 c 111 days d 310 days
- 4 The probable cause of delayed ovulation in cow is ( )  
 a Delay in Progesterone release b Delay in estrogen release  
 c Delay in Prostaglandin release d Delay in LH release
- 5 In sows, signs of estrus include all of the following **except:** ( )  
 a Perked up ears b Mounting of the male by sow  
 c Salivation, champing and grunting d Standing to be ridden by the boar
- 6 Predominantly how many follicular waves occurring during estrous cycle in bovine? ( )  
 a 1 c 3  
 c 2 d 4
- 7 The onset of puberty in dogs is ( )  
 a 5-6 months b 6-12 months  
 c 12-15 months d 16-18 months
- 8 Endometrial cups present in ( )  
 a Mare b Cow  
 c Sow d Bitch
- 9 Which of the following is not a predisposing cause for the cystic ovarian degeneration in cows? ( )  
 a Heredity b intensive  
 c Nutrition d Milk yield
- 10 Which of the following enzyme involved during the process of ovulation in cows ( )  
 a lipase b Hyaluronidase  
 c Collagenase d Esterase
- 11 Which of the following hormone steadily increases around the time of ovulation in bitches? ( )  
 a GnRH b Progesterone  
 c LH d Estrogen
- 12 Abortion caused by the vibriosis is due to ( )  
 a C. fetus b Mycotic  
 c Brucella abortus d None of the above
- 13 Which of the following does not occur during oocyte maturation ( )

- |    |   |  |  |
|----|---|--|--|
|    | a Mitotic division  | b Cytoplasmic growth                               |  |
|    | c Expansion of cumulus cells  | d Nuclear arrest                                   |  |
| 14 | Inhibin has got negative feedback over hypothalamus and pituitary to control the release of | ( )  |  |
|    | a FSH alone   | b LH alone   |  |
|    | c FSH and Prolactin   | d None of the above                                |  |
| 15 | The following cells will be identified in VEC of Bitches during proestrus                   | ( )  |  |
|    | a RBC   | b Intermediate and Superficial cells               |  |
|    | c Neutrophils   | d All the above                                    |  |
| 16 | The most accurate measurement of ovulation time in bitches is by estimating the             | ( )  |  |
|    | a LH  | b PGF2 alpha                                       |  |
|    | c Prolactin   | d FSH  |  |
| 17 | The once a day dose of bromocriptine for treating pseudopregnancy in dogs is about          | ( )  |  |
|    | a 10-30 mg/kg   | b 100-300 mg/kg                                    |  |
|    | c 10-30 µg/kg   | d 100-300µg/kg                                     |  |
| 18 | Which one is a antiprogestin drug   | ( )  |  |
|    | a Crestar   | b Misoprostol                                      |  |
|    | c Aglepristone  | d TRIU-B   |  |
| 19 | Luteal cyst is  | ( )  |  |
|    | a Anovulation   | b Usually develops from normal CL                  |  |
|    | c Normally develops just after ovulation  | d None of the above                                |  |
| 20 | Early embryonic death is suspected from   | ( )  |  |
|    | a Long estrus cycle   | b Short estrus cycle                               |  |
|    | c Intense estrus  | d None of the above                                |  |
| 21 | Which of the following is not the function of uterus  | ( )  |  |
|    | a Gametogenesis   | b Control of cyclicity                             |  |
|    | c Contribution to placenta  | d Provides environment for pre-attachment embryo   |  |
| 22 | Fertilization takes place at the  | ( )  |  |
|    | a Uterotubal junction   | b Ampulatory isthmic junction                      |  |
|    | c Isthmus   | d Ampula   |  |
| 23 | The functional cyclical corpus luteum of non pregnant animal is                             | ( )  |  |
|    | a Albicans  | b spurium  |  |
|    | c Verum   | d Cystic CL  |  |
| 24 | Time of ovulation in cattle   | ( )  |  |
|    | a 12 hours after end of estrus  | b Diestrus   |  |
|    | c 12 hours before onset of estrus   | d All the above                                    |  |
| 25 | Embryo transfer can be used to  | ( )  |  |
|    | a Rapidly increase rare blood lines   | b To obtain more off springs from valuable females |  |
|    | c To facilitate progeny testing and thus  | d All of the above                                 |  |

- reducing the generation interval
- 26 Which one is not a steroid hormone secreted from gonads ( )  
a Relaxin b. Progesterone  
c. Androgens d. Estrogens
- 27 PMSG is a glycoprotein hormone similar to ( )  
a LH activity b. Progesterone like activity  
c. FSH activity d. None of the above
- 28 Leptospirosis causes abortion in bovine which is diagnosed by ( )  
a MAT b. White side test  
c. FAT d. None of the above
- 29 In a good maintained cattle farm , the ideal service per conception is ( )  
a 1.5 to 1.7 b. 2.0 to 3.0  
c. 2.5 to 3.7 d. None of the above
- 30 The block to polyspermy is at the zona pellucida is seen in ( )  
a Sheep and swine b. Rabbit  
c Both a and b d. None of the above
- 31 The duration of the proestrus in dog is ( )  
a. 16 days b. 18 days  
c. 9 days d. None of these
- 32 Spontaneous ovulation occurs in ( )  
a. Cat b. Rabbit  
c. Ferrets d. Mare
- 33 Gestation length in a mare is about ( )  
a 285 days b 660days  
c 111 days d 310 days
- 34 Animal showing external evidence of pro-oestrus with vulval oedema, hyperemia & sanguinous vulval discharge is ( )  
a Cattle b Bitch  
c Doe d Ewe and Mare
- 35 Mammary gland duct system growth is under the influence of ( )  
a Estrogen b Progesterone  
c Prolactin d Prostaglandins
- 36 Exogenous oxytocin has luteolytic action in ——— ( )  
a Bitch b Cow and Ewe  
c Cattle and Sow d Cow and Doe
- 37 Mammary gland alveolar growth is under the influence of ( )  
a Estrogen b Progesterone  
c Prolactin d Prostaglandins
- 38 Predominate Ig in follicular fluid is ——— ( )  
a Ig A b Ig M  
c Ig G d Ig E
- 39 4 – Cell stage embryo is transported from site of fertilization to uterus in ( )



- a Sow b Mare  
c Ewe d Cattle
- 40 Transuterine migration of embryo is absent in \_\_\_\_\_ ( )  
a Bitch b Cattle  
c Sow d Both a and c
- 41 Maternal Recognition of Pregnancy (M.R.P) is responsible for ( )  
a Fetal growth b Implantation  
c Maternal circulation d Fertilization
- 42 First maturation division / meiotic division is not completed at the time of ovulation ( )  
in  
a Sow b Cattle and Buffaloe  
c Ewe and Doe d Mare and Bitch
- 43 Hippomanes are usually found in \_\_\_\_\_ ( )  
a Yolk sac b Amniotic fluid  
c Allantoic fluid d All of these
- 44 Steroid hormones have receptors in \_\_\_\_\_ ( )  
a Cytoplasm b Nucleus  
c Cell membrane d Both a & c
- 45 An anabolic hormone \_\_\_\_\_ ( )  
a Insulin b Estrogen  
c Testosterone d All of these
- 46 An animal in which pheromones are secreted in saliva foam ( )  
a Boar b Bull  
c Stallion d Ram
- 47 The C.L persists through out pregnancy in all farm animals except\_\_\_\_\_ ( )  
a Mare b Cow  
c Ewe d Dog
- 48 \_\_\_\_\_ is the major metabolic fuel for foetus ( )  
a Glucose b Cervical fluid  
c Cellulose d None of the above
- 49 Congenital valvular defects are common in \_\_\_\_\_ species ( )  
a Mare b Cow  
c Ewe d Dog
- 50 Super fecundation is more common in \_\_\_\_\_ ( )  
a Dog and Cat b Mare  
c Ewe d None of the above
- 51 Match the following ( )  
A. Chediak Higashi syndrome 1. Swine  
B. Polycystic Kidneys 2. Hopping gait

- C. Anury  
D. Twinning  
E. "Balling Up"  
F. Prolonged gestation
3. Ghost Pattern  
4. Boars  
5. Iodine deficiency  
6. Equine abortion
- a 3, 1, 2, 6, 4, 5  
c 6, 3, 1, 5, 2, 4
- b 2, 5, 3, 1, 6, 4  
d 5, 3, 6, 2, 1, 4
- 52 Match the following ( )
- A. Mature C.L.  
B. Female genitalia  
C. Slipping of fetal membranes  
D. Male genitalia  
E. Fremitus  
F. Cuboni Test
1. Mesonephric duct  
2. 40 – 90 days of gestation  
3. 80 – 120 days of gestation  
4. Liver fluke like consistency  
5. Paramesonephric duct  
6. 150-290 days of gestation
- a 4, 1, 3, 5, 2, 6  
c 4, 5, 2, 1, 3, 6
- b. 4, 1, 6, 5, 3, 2  
d. 4, 5, 3, 1, 6, 2
- 53 Match the following ( )
- A. Pseudo pregnancy  
B. Prostaglandin antagonist  
C. Endotheliochorial placenta  
D. Epitheliochorial placenta  
E. Accelerating parturition  
F. Synepitheliochorial placenta
1. Dog & Cat  
2. Ruminants  
3. Carazolol  
4. Bromocriptine  
5. Horse & Pig  
6. Indomethacin
- a. 4, 3, 6, 1, 5, 2  
c. 4, 6, 1, 5, 3, 2
- b. 6, 3, 5, 2, 4, 1  
d. 6, 1, 5, 2, 4, 3
- 54 Unfertilized ovum remains for months in the oviduct of \_\_\_\_\_ species ( )
- a Sow  
c. Ewe and Doe
- b. Mare  
d. Bitch
- 55 In sows, maternal recognition of pregnancy is mainly due to the action of ( )
- a Interferon tau  
c. Estrogen
- b. Oxytocin  
d. Prostaglandins
- 56 Endometrial cups are formed from ( )
- a chorionic girdle (fetal origin)  
c. endometrium (maternal origin)
- b. maternal caruncles  
d. none of the above
- 57 In sow, the villi near the endometrial glands are enlarged and specialized to form structures called ( )
- a Hippomanes  
c. Areolae
- b. Amniotic plaques  
d. Placentomes
- 58 Most of the developmental anomalies occur during ( )
- a Period of embryo  
c. Period of fetus
- b. Period of ovum  
d. During birth

- 59 Low land abortion or Marsh land abortion is due to ( )  
a Fescue poisoning b. Leptospirosis  
c. Nitrate poisoning d. None of the above
- 60 Trichomonas abortion is more common in —trimester of pregnancy ( )  
a First trimester b. Second trimester  
c Third trimester d. None of the above
61. Opening the isthmus into the uterus is called as ( )  
a. Ostium tubae abdominale b. Ostium tubae uterinum  
c. Utero tubal junction d. Non of these
62. The number of the caruncle present in the endometrium of cow is ( )  
a. 150-197 b. 77-87  
c. 88-96 d. 70-120
63. Cystic ovarian degeneration in bovine is due to ( )  
a. Hypocalcemia b. Hyphokalemia  
c. Cholestrol excess d. Lack of LH
64. By rectal examination in cattle the palpation of placentomes unthil \_\_\_\_\_ days of pregnancy ( )  
a. 75 to 80 days b. 45 to 50 days  
c. 95 to 100 days d. 120 to 180 days
65. Paratyphoid abortion, a form of salmonellosis in sheep is principally caused by ( )  
a. Salmonella abortus ovis b. Salmonella dublin  
c. Salmonella meleagridis d. All the above
66. Spontaneous ovulation occurs in ( )  
a. Cat b. Rabbit  
c. Mare d. All the above
67. White side test is used for the diagnosis of ( )  
a. Sub clinical b. Listeriosis

Endometritis

- c. Anestrus                      d. Endometritis

68. MATCH THE FOLLOWING

- |                                  |                  |
|----------------------------------|------------------|
| A. Post partum vaginal discharge | 1. Glycoprotein  |
| B. Pseudo pregnancy              | 2. Secundus      |
| C. Cervical mucus Transfer, 1890 | 3. Embryo ( )    |
| D. Embryonic estrogen            | 4. Clenbuterol   |
| E. Heape                         | 5. M.R.P. in Pig |
| F. Delaying Parturition          | 6. Cabergoline   |

- a. 2, 6, 1, 5, 3, 4                      b. 2, 4, 5, 1, 3, 6  
 c. 6, 5, 1, 2, 4, 3                      d. 5, 3, 2, 1, 4, 6

69. yellowish brown discoloration of the fetal cotyledons and leather-like thickening or edema of the inter cotyledonary spaces ( )

- a. Vibriosis                      c. Listeriosis  
 b. Leptospirosis                      d. Tuberculosis

70. The type of bovine uterus is classified under ( )  
 a. Bicornuate                      b. Simple  
 c. Duplex                      d. None of the above

71. The first ovulation is not having behavioral estrous, for which ( )  
 \_\_\_\_\_ hormone primes the hypothalamus  
 a. GnRH                      b. Estrogen  
 c. LH                      d. Progesterone

72. The corpus luteum will be responsible to synthetic prostaglandin in ( )  
 a. First four day of cycle                      b. Last four day of cycle  
 c. Both a and b                      d. None of the above

73. Which of the following is normal in white heifer disease ( )  
 a. Vagina                      b. cervix  
 c. uterus                      d. Ovary

74. The ovulation time in ewes ( )  
 a. Onset of LH surge                      b. Last day of estrous  
 c. 5 hrs after onset of estrous                      d. 5 hrs after LH surge

75. When estradiol is having positive feedback ( )

- a Inhibin is high      b Dominant follicle  
c Absence of Progesterone      d Activin is high
- 76 The adenohipophysial content of LH is highest in ( )  
a Sheep      b Horse  
c Man      d None of the above
- 77 The onset of puberty in mare is ( )  
a 5-8 months      b 8-12 months  
c 12-15 months      d 16-18 months
- 78 The preovulatory LH release LH is from ( )  
a Tonic center      b Surge center  
c Both a & b      d None of the above
- 79 The presence of \_\_\_\_\_ prevents Defeminisation of surge center in female ( )  
a Glycoprotein      b somatostatin  
c  $\alpha$  fetoprotein      d Inhibin
- 80 Radiography may help determine the viability of late-term foetuses. Which of the following is **not** a radiographic sign of fetal death? ( )  
a Intrauterine gas      b Absence of molar teeth in fetal jaws  
c Fetal subcutaneous gas      d Hyperflexion of fetal bodies
- 81 Intrauterine oxygen reductase potential (Eh) can be used to find ( )  
a Degree of bacterial infection      b Degree of Damage to endometrium  
c Presence of RBCs      d Presence of Prostaglandins
- 82 Oxytocin and Vasopression are very similar in composition with ----- of the 8 amino acids in these tow hormones being similar ( )  
a 7      b 6  
c 4      d 2
- 83 The numbers of germ cells in the ovaries of the individual cattle is highly variable ranging from ----- to ----- ( )  
a 0 to 2 Lakhs      b 1000 to 1 Lakhs  
c 0 to 7 Lakhs      d 10,000 to 1 Lakhs
- 84 There is a chance that a cow is pregnant when progesterone levels in the milk are ( )  
a High at the time of AI and high 21 days later      b Low at the time of AI and high 22 days later  
c High at the time      d Low at the time of AI and low 21

- of AI and low days later  
22 days later
- 85 Superovulation involves ( )  
 a The administration of PGF 2 days before starting FSH injections  
 b Inseminating once, 12 hours after detecting the cow in heat  
 c repeated FSH injections, 8 in total, beginning on day 10 -12 of the estrous cycle  
 d None of the above
- 86 Which one of the following having the anti-estrogenic effect ( )  
 a MAP b MGA  
 c CAP d MRL4
- 87 In “spilt heat” ( )  
 a Estrus symptoms not expressed clearly  
 b Animal will conceive if bred  
 c Animal does not ovulate  
 d Animal will have prolonged estrus
- 88 Which of the following enzyme involved during the process of ovulation in cows ( )  
 a lipase b Hyaluronidase  
 c Collagenase d Esterase
- 89 Which of the following statement is not true with regard to luteolysis in farm animals ( )  
 a Presence of oxytocin receptors on endometrial cells  
 b Presence of critical level of oxytocin  
 c PGF2 alpha synthesis by endometrium  
 d Presence of threshold level of LH
- 90 During folliculogenesis for the initial recruitment of the follicles which of the following hormonal condition is essential ( )  
 a Low FSH and high LH  
 b High FSH and high LH  
 c Low FSH and high Inhibin  
 d High FSH and low LH
- 91 eCG secreted by endometrial cups in mare during pregnancy can be detected in circulation until ( )

- a 40 days                      b 80 days  
c 60 days                      d 120 days
- 92 Gestation length in swine ( )  
a 333 days                      b 222 days  
c 111 days                      d 210 days
- 93 The length of the tubular part of the horn is longer in ( )  
a Mare                          b Cow  
c Sow                              d Bitch
- 94 Granulosa cell tumor is most common in cattle that may cause ( )  
occasional symptoms of  
a Nymphomania                b Anestrus  
c Both a and b                 d None of the above
- 95 In cows, for optimum super ovulatory response, gonadotropin ( )  
treatment is initiated on which day of estrous cycle  
a 4 - 8                          b 5 - 9  
c 9 - 14                         d 14 - 17
- 96 Segmental aplasia of the Mullerian or paramesonephric ducts is ( )  
caused by  
a Single,                         b Single sex-limited gene  
recessive, sex-  
limited gene  
c Single,                         d None  
dominant, sex-  
limited gene                      of the  
above
- 97 The pH of the vaginal mucus during estrus in mare is ( )  
a 7.9 to 8.1                      b 8.5 to 8.7  
c 6.5 to 7.0                      d 7.1 to 7.5
- 98 The weight of the ovaries at the time of birth in mare is ( )  
about \_\_\_\_\_  
a 120 to 150                      b 40 to 70 grams  
grams  
c 20 grams                        d None of the above
- 99 Puberty in cats usually occurs between ----- and ----- ( )  
months of age depending upon the kittens nutritive state  
and genetic background.  
a 3 and 4                         b 12 and 15  
c 7 and 12                        d None of the above

- 100 Dystrophia adiposogenitalis or Frohlich's syndrome is ( )  
occasionally observed in dogs of either sex and is caused  
by tumors of the -----
- a Pituitary                      b Hypothalamus  
c Both a and b                d None of the above

**Key answers**

Question No.	Answer	Question No.	Answer	Question No.	Answer	Question No.	Answer
1	a	26	a	51	a	76	a
2	d	27	c	52	c	77	d
3	d	28	c	53	c	78	b
4	d	29	a	54	b	79	c
5	b	30	d	55	c	80	b
6	b	31	c	56	a	81	a
7	b	32	d	57	c	82	b
8	a	33	b	58	a	83	c
9	b	34	b	59	c	84	b
10	c	35	a	60	a	85	a
11	c	36	d	61	c	86	d
12	a	37	b	62	d	87	c
13	d	38	c	63	d	88	c
14	a	39	a	64	a	89	d
15	d	40	b	65	d	90	d
16	a	41	b	66	c	91	d
17	c	42	d	67	a	92	c
18	c	43	c	68	a	93	c
19	a	44	a	69	a	94	c
20	b	45	d	70	d	95	a
21	a	46	a	71	a	96	a
22	b	47	a	72	d	97	a
23	b	48	a	73	d	98	c
24	a	49	a	74	d	99	c
25	d	50	a	75	b	100	c



## Veterinary Obstetrics

- 1 The incidence of dystocia in posterior presentation of fetus in unipara is ( )
  - a. Low
  - b. Moderate
  - c. High
  - d. Absent
  
- 2 Primary uterine inertia is seen most often in which species? ( )
  - a. Ewe
  - b. Bitch
  - c. Mare
  - d. Sow
  
- 3 Prolonged dystocia leads to fatigue of the uterine muscle and produce contraction or retraction rings called as ( )
  - a Schaafer's ring
  - b Uterine ring
  - c Bandle's ring
  - d Robert's ring
  
- 4 Small litter size leads to cause larger fetuses that may predispose to dystocia in ( )
  - a Ewe
  - b Bitch
  - c Mare
  - d Sow
  
- 5 Obstetrical hooks may be long or short but should always be ( )
  - a Pointed
  - b Straight
  - c Sharp
  - d Blunt
  
- 6 Repulsion may be accomplished by the operator's arm, the arm of an assistant or by ( )
  - a Fetotome
  - b Ropes
  - c Crutch repeller
  - d Obstetrical chain
  
- 7 The corneas are grey and opaque after the fetus has been dead for ( )
  - a 6 to 12 hours
  - b 12 to 20 hours



- 15 In most cows the presence of very relaxed ligaments indicates that parturition will probably occur in ( )
- a 6 to 12 hours b 12 to 20 hours  
c 48 to 72 hours d 24 to 48 hours
- 16 Almost all severe dystocia occurs in heifers with pelvic area of ( )
- a 200 to 240 sq. cm b 250 to 270 sq. cm  
c 290 to 320 sq. cm d 270 to 290 sq. cm
- 17 Schistosoma reflexus is seen in cow and occasionally in sheep, goat and pig but ( )
- a Very common in other species b Rarely in other species  
c Frequently in other species d Never in other species
- 18 The technique of epidural anesthesia was introduced by Benesch in ( )
- a 1935 b 1915  
c 1945 d 1926
- 19 The condition of obturator paralysis is ( )
- a More prevalent in heifers than in cows b More prevalent in cows than in heifers  
c Commonly prevalent in both cows and heifers d More prevalent in heifers than in cows
- 20 The turning of the fetus on its long axis to bring the fetus into dorso-sacral position is called ( )
- a Repulsion b Rotation  
c Adjustment of extremities d Version
- 21 In which species abdominal contractions are so violent that if the fetus is in proper presentation, position and posture, forced extraction is seldom necessary? ( )
- a Bovine b Feline  
c Swine d Equine

- 22 Necrotic vaginitis and vulvitis is observed most often in ( )  
 a Dairy and beef heifers b. Bitch and queens  
 c Mare d. Sow
- 23 fetal emphysema and sloughing of the hair is present the fetus has been dead for ( )  
 a. 6 to 12 hours b 12 to 24 hours  
 c. 48 and more d 24 to 48 hours
- 24 Puerperal tetany or eclampsia in the bitch and cat is a metabolic disease characterized by ( )  
 a Hypoglycemia b. Hypercalcemia  
 c. Hypocalcemia d. Hyperglycemia
- 25 Dystocia caused by the cord being wrapped around a portion or extremity of fetus ( )  
 a Frequently occurs in domestic animals b. Frequently causes fetal dead in domestic animals  
 c. Frequently causes dystocia d. Does not occurs in domestic animals
- 26 During parturient paresis in cow the blood serum calcium level drops from a normal of 8-12 g/100ml to ( )  
 a 3-7g/100ml b Less than 2g/100ml  
 c 8-9g/100ml d Less than 1g/100ml
- 27 The incidence of Hydramnios in cattle is \_\_\_\_\_ ( )  
 a 5-10 % b 85-90 %  
 c 30-40 % d 50-60 %
- 28 Transverse ventral presentation is most commonly observed in the ( )  
 a Cow b Dog  
 c Mare d None of the above
- 29 Relation between dorsum of fetus to maternal quadrants is termed as ( )

- |  |  |
|--|--|
| <p>a Presentation</p> <p>c Posture</p> | <p>b Position</p> <p>d None of the above</p> |
|--|--|
- 30 Which of the following bones form the posterior part of pelvic floor ( )
- |   |   |
|---|---|
| <p>a Ilium and pubis</p> <p>c Ischium</p> | <p>b Hook bone</p> <p>d Tuber sacrale</p> |
|---|---|
- 31 A complication of rather diffuse bleeding occurring from the submucosal area of the uterus after incising during cesarean section occurs in ( )
- |                  |                  |
|------------------|------------------|
| <p>a. Bovine</p> | <p>b. Feline</p> |
|------------------|------------------|
- 32 The new born free martin can be characterized by ( )
- |  |   |
|--|---|
| <p>a Small vulval lips and lack of vaginal patency</p> <p>c Lack of clitoris and lack of vaginal patency</p> | <p>b Lack of vaginal patency and prominent clitoris</p> <p>d Prominent clitoris and small vulval lips</p> |
|--|---|
- 33 Twinning in mare almost leads to ( )
- |  |                                     |
|--|-------------------------------------|
| <p>a Early embryo resorption</p> <p>c Early abortion</p> | <p>b Late abortion</p> <p>d All</p> |
|--|-------------------------------------|
- 34 Cervico vaginal proalapse is rarely occur in ( )
- |                                      |                             |
|--------------------------------------|-----------------------------|
| <p>a Bitch</p> <p>c Both a and b</p> | <p>b Mare</p> <p>d None</p> |
|--------------------------------------|-----------------------------|
- 35 Which of the following statement is not correct for uterine torsion ( )
- |  |   |
|--|---|
| <p>a Pre cervical torsion is not common than post cervical torison</p> <p>c Left side of torsion is not common than right side</p> | <p>b Torsion occurs in early gestation</p> <p>d All</p> |
|--|---|
- 36 The second and third stage of labor is merged in ( )
- |                            |                              |
|----------------------------|------------------------------|
| <p>a Monotocus animals</p> | <p>b Polyestrous animals</p> |
|----------------------------|------------------------------|

- c Polytocus animals                      d Pluriparous animals
- 37 Transuterine Migration of conceptus is noticed in \_\_\_\_\_ species ( )
- a Bovine                                      b Equine  
c Caprine                                      d Ovine
- 38 Fetal reflex for breech presentation is \_\_\_\_\_ ( )
- a Pedal                                      b Anal  
c Palpebral                                      d Suckling
- 39 Ring womb condition is commonly found in \_\_\_\_\_ ( )
- a Bovine                                      b Swine  
c Ovine                                      d Equine
- 40 Chronic inflammation of the uterus characterized by fibrotic changes in the uterine wall ( )
- a Puerperal metritis                      b Septic metritis  
c Sclerotic metritis                      d Parametritis
- 41 Foot nape indicates \_\_\_\_\_ ( )
- a Transverse Dorsal                      b Posterior Longitudinal  
c Ant Long. Limb over neck                      d Transverse ventral
- 42 \_\_\_\_\_ is the most common bacteria found in genital infections in horses. ( )
- a St. genitalium                              b Staphylococcus aureus  
c Pseudomonas                              d Leptospira
- 43 Long existing extra-uterine fetuses become quite firm and encapsulated with calcium laid down in the capsule is called as \_\_\_\_\_. ( )
- a Lithopedians                              b superfecundation  
c Superfetation                              d Fetal mummy

- 44 Which of the following instrument/s is used for Fetotomy ( )  
 a Gunther's knife b Thygesen's embryotome  
 c Concealed palm knife d All the above
- 45 The drug of choice for induction of parturition in equine is \_\_\_\_\_ ( )  
 a Clenbuterol b Oxytocin  
 c Progesterone d Valathamide
- 46 Fetal cortisol stimulates the conversion of progesterone in to estrogen during parturition by activating the enzyme ( )  
 a Phopholipase b Lipase  
 b 17- alpha hydroxylase d None of the above
- 47 The pregnancy in canines can be terminated by using ( )  
 a Prolactin b Folligon  
 c Mifipristone d LH
- 48 \_\_\_\_\_ is a beta adrenergic stimulant used to delay parturition in cows ( )  
 a Progesterone b Estrogen  
 c Isoxysuprine d All the above
- 49 Foal heat occurs at \_\_\_\_\_ days after foaling ( )  
 a 2-4 b 5-12  
 c 15-20 d 35-38
- 50 Decline in temperature before parturition is related with decline in \_\_\_\_\_ hormone ( )  
 a Relaxin b PGF2 alpha  
 c Progesterone d oxytocin
- 51 Atresia ani is seen in all domestic animals but most commonly seen in ( )  
 a Cow b Cat

- c Pig d None of the above
- c a only d. both a and b
- 53 The following one which is not used for correction of uterine torsion ( )
- a. Cornell detorsion rod b. Commerer's torsion fork
- c. Erikson's rotator d. Whilliam's crutch repeller
- 54 Primary uterine inertia is seen most often in ----- and rarely in ----- ( )
- a Dog , Mare b. Cow, sow
- c. Mare, cow d. Cow , Dog
- 55 Maternal causes of dystocia includes ( )
- a Fractures and exostoses of pelvis b. Stunning of body growth
- 56 Fetal ascites is seen as an occasional cause for dystocia in any species but occurs most often in the \_\_\_\_\_ ( )
- a Cow b Cat
- c. Pig d None of the above
- 57 Dystocia due to fetal embphysema is observed in species and is usually associated with a prolonged dystocia of \_\_\_\_\_ hours of duration. ( )
- a 12 to 18 hours b 24 to 48 hours
- c. 14 to 36 hours d 12 to 24 hours
- 58 Uterine or vaginal rupture may occur due to ( )
- a Improper manipulation b. Fatigue of the operator
- c. Protruding bones of the fetus d. All the above
- a Mare b. Dog
- c. Cow d. Cat
- 60 Post parturient hemoglobinuria is an uncommon disease of high producing older dairy cows occurring 2 to 4 weeks after calving having the ----- symptoms ( )



- |   |                |    |                |  |
|---|----------------|----|----------------|--|
| a | Anemia         | b. | Hemoglobinuria |  |
| c | Hemoglobinemia | d. | All the above  |  |
- 61 The presence of a dark green vulvar discharge more than ----- hours after parturition is a symptom of retention of fetal membranes in dog. ( )
- |    |          |   |          |
|----|----------|---|----------|
| a. | 12 hours | b | 24 hours |
| c. | 48 hours | d | 72 hours |
- 62 Puerperal laminitis is most likely to occur in----- ( )
- |    |      |    |     |
|----|------|----|-----|
| a. | Mare | b. | Dog |
| c. | Cow  | d. | Cat |
- 63 Comprest or bull dog calves are seen in all breeds but most commonly in the ----- breeds ( )
- |   |          |   |               |
|---|----------|---|---------------|
| a | Hereford | b | Ayrshire      |
| c | Angus    | d | All the above |
- 64 True hermaphrodites is most frequently seen in ( )
- |   |        |   |       |
|---|--------|---|-------|
| a | Cattle | b | Sheep |
| a | Cattle | b | Sheep |
| c | Goat   | d | Horse |
- 66 ----- is seen occasionally in cattle and swine and is characterized by lack of vertebrae and spinal cord caudal to the thoracic region ( )
- |   |                       |   |                          |
|---|-----------------------|---|--------------------------|
| a | Schistosomus reflexus | b | Perosomus elumbis        |
| c | Perosomus horridus    | d | Campylorrhachis scoliosa |
- 67 Nongenetic anomalies similar to genetic anomalies are called as ( )
- |   |             |   |                   |
|---|-------------|---|-------------------|
| a | Phenocopies | b | Teratogens        |
| c | Monster     | d | None of the above |
- 68 Invagination of the uterine horn is occasionally noted in the \_\_\_\_\_ and \_\_\_\_\_ but occurs only rarely in other species ( )



- 76 The incidence of the dystocia in posterior presentation of the fetus in unipara is ( )  
 a Low b Moderate  
 c High d Absent
- 77 Epidural anesthesia in sows can be given in ( )  
 a Lumbosacral space b Sacrococcygeal space  
 c Thoracolumbar space d None of the above
- 78 The most common sequelae of hydrallantois are ( )  
 a Retained placenta and incomplete cervical dilatation b Septic metritis and anomalous fetus  
 c a. Cervicitis and salpingitis d Septic metritis and retained placenta
- 79 Placentophagy is commonly noticed in \_\_\_\_\_ ( )  
 a Cow b Dog  
 c Mare d None of the above
- 80 In bitches, The post partum lochia is green in colour due to the pigment “Uteroverdin” which is a break down product of \_\_\_\_\_ ( )  
 a Haemoglobin b urea  
 c Myoglobin d None of the above
- 81 High feeding levels may favour dystocia, especially in heifers by excessive deposition of fat in the ( )  
 a. Abdominal region b. Pelvic region  
 c. Uterine horn d. Genitalia
- 82 Manual removal of the placenta is contraindicated in cows with elevated body temperature above ( )  
 a. 101 degree F b. 103 degree F  
 c. 102 degree F d. Not contraindicated

- 83 “waxing of teat” is observed In \_\_\_\_\_ ( )  
 a Mare b Cow  
 c Bitch d Ewe
- 84 Secondary uterine inertia that is seen in all species is the result of ( )  
 a Hormonal imbalance b Nutritional deficiency  
 c Exhaustion of uterine muscle d Fetal oversize
- 85 At birth what is the approximate percentage of birth weight of foal in relation to the mature weight ( )  
 a 4 per cent b 6 per cent  
 c 9 per cent d less than 2 per cent
- 86 The advantages of fetotomy is ( )  
 a It reduces the size of the fetus b It avoids cesarean operation  
 c It may cause injury to the uterus or birth canal d Both a and b
- 87 True fetal gigantism is seen mostly commonly in ( )  
 a Mare b Bitch  
 c Cow d Sow
- 88 The umbilical cord being wrapped around a portion or extremity of fetus leads to dystocia ? ( )  
 a Does not occurs in domestic animals b Frequently causes dystocia  
 c Frequently occurs in domestic animals d None of the above
- 89 Bandl’s contraction rings are seen in \_\_\_\_\_ uterine inertia ( )  
 a Secondary b Late  
 c Early d Primary

- 90 Amorphus globosus was an imperfect zygote of dizygotic twins commonly seen in ( )  
 a Cow b Cat  
 c Dog d None of the above
- 91 Cyclopia is most commonly seen in ( )  
 a. Cow b Cat  
 c. Pig and sheep d None of the above
- 92 Vasopresin exhibits about 20 per cent of the milk ejection activity of oxytocin which increase the intracistern pressure up to ( )  
 a. 30 to 45 mm of mercury b. 5 to 15 mm of mercury  
 c. 60 to 75 mm of mercury d. None of the above
- 93 Ketosis or acetonemia in cattle is rarely observed during ( )  
 a Prior to parturition b 10 to 60 days after parturition  
 c 7 to 10 days after parturition d None of the above
- 94 Hypocalcemia or hypomagnesemia is a metabolic disease of dairy cattle especially those animals which are in ( )  
 a Advanced pregnancy and fed with early wheat pastures b Transported and or under stress  
 c Lactating heavily and Grazing on lush d All the above
- 95 In physiological parturition the afterbirth of the cow falls away within ( )  
 a 3 to 8 hours b 24 to 48 hours  
 c 8 to 12 hours d 12 to 24 hours
- 96 The following is the not the causative factor for retained placental membrane in cow ( )  
 a Excess cortisol in late gestation b Uterine inertia  
 c Progesterone deficiency in late gestation d Excess amount of LH hormone

- 97 Retained placental membrane is uncommon except in \_\_\_\_\_ ( )  
 a Sow b Cat  
 c Bitch d Cow
- 98 A persistent urachus is seen most commonly in the new born of ( )  
 a Mare b Cow  
 c Cat d Dog
- 99 Copper deficiency in new born animals causing the following like ( )  
 c Locomotor incoordination d All the above
- 100 Edema of the tongue of the new born fetus is common in calves in anterior presentation is due to ( )  
 a head protruding through the vulva for long time b Intra pelvic pressure due to narrow pelvis  
 c Edema of the forelimbs d All the above

Key answers

Question No.	Answer	Question No.	Answer	Question No.	Answer	Question No.	Answer
1	c	26	a	51	c	76	c
2	b	27	a	52	b	77	a
3	c	28	c	53	d	78	d
4	d	29	b	54	a	79	b
5	d	30	c	55	d	80	a
6	c	31	d	56	a	81	b
7	a	32	b	57	b	82	b
8	c	33	a	58	d	83	a
9	a	34	b	59	a	84	c
10	a	35	b	60	d	85	c
11	d	36	c	61	a	86	d
12	a	37	b	62	a	87	c
13	a	38	b	63	d	88	a
14	d	39	c	64	d	89	a
15	d	40	c	65	c	90	a
16	a	41	c	66	b	91	c
17	d	42	a	67	a	92	a
18	d	43	a	68	c	93	a
19	a	44	d	69	b	94	d
20	b	45	b	70	a	95	a
21	d	46	b	71	d	96	d
22	a	47	c	72	a	97	d
23	d	48	c	73	c	98	a
24	c	49	b	74	b	99	d
25	d	50	c	75	b	100	d

**Veterinary Andrology and Artificial Insemination**

1. The length of epididymal tube in bull is ( )
  - a. 20 meters
  - b. 30 meters
  - c. 40 meters
  - d. 50 meters
2. Scrotum is absent in ( )
  - a. Elephant
  - b. Rhinoceros
  - c. Birds
  - d. All of the above
3. In pig, testicular descent into scrotum occurs at ( )
  - a. 2 months
  - b. 3 months
  - c. 4 months
  - d. 5 months
4. Daily sperm production for a bull with testes weighing about 400 gms each is ( )
  - a. 7 billion
  - b. 10 billion
  - c. 12 billion
  - d. 15 billion
5. Number of spermatozoa formed from one type A spermatogonia is ( )
  - a. 4
  - b. 16
  - c. 32
  - d. 64
6. Blood pressure in the corpus cavernosum penis at the time of erection in bull is ( )
  - a. 170 mm of Hg
  - b. 270 mm of Hg
  - c. 1700 mm of Hg
  - d. 2700 mm of Hg
7. Ergothionine present in stallion semen is secreted from ( )
  - a. Ampulla
  - b. Prostate gland
  - c. Seminal vesicle
  - d. Bulbourethral gland
8. High level of inositol is present in the semen of which of the following species ( )
  - a. Bull
  - b. Ram
  - c. Stallion
  - d. Boar
9. Sticky, gelatinous, tapioca like material present in the boar semen is secreted from ( )
  - a. Ampulla
  - b. Prostate gland
  - c. Seminal vesicle
  - d. Bulbourethral gland
10. The vices of ejaculation by inserting penis into the preputial diverticulum is seen in ( )
  - a. Ram
  - b. Stallion
  - c. Bull
  - d. Boar



11. Osmotic pressure of semen ranges from ( )  
 a 280 to 300 milli osmol                      b 100 to 120 milli osmol  
 c 10 to 50 milli osmol                         d None of the above
12. Major storage site for spermatozoa is ( )  
 a Caput epididymis                              b Corpus epididymis  
 c Cauda epididymis                             d Ampulla
13. Os penis is present in ( )  
 a Dog     b Foxes  
 c Raccoons                                         d All of the above
14. Duration of the cycle of seminiferous epithelium in ram is ( )  
 a 9 days    b 10 days  
 c 12 days     d 14 days
15. Duration of copulation is longest in which of the following species ( )  
 a Cattle    b Horse  
 c Sheep    d Pig
16. Licking of penis after ejaculation as a post coital behavior is found in ( )  
 a Bull     b Ram  
 c Buck     d Stallion
17. In stallion, the maximum number of ejaculations to exhaustion are ( )  
 a 10    b 15  
 c 20    d 25
18. Flehman's reaction to estrus female urine is absent in ( )  
 a Cattle    b sheep  
 c Horse    d Pig
19. Inability to withdraw the penis into the prepuce is called as ( )  
 a Phimosis                                         b Paraphimosis  
 c Phallocampsis                                 d None of the above
20. The percent of sodium citrate dehydrate added in egg yolk citrate diluents is ( )  
 a 1.5 %    b 2.9 %  
 c 3.5 %    d 4.1 %

21. Spermiostasis due to aberrant efferent or epididymal tubules is commonly seen in ( )  
 a Bull b Ram  
 c Buck d Boar
22. The surface area of French mini straw is ( )  
 a 555 mm<sup>2</sup> b. 823 mm<sup>2</sup>  
 c 950 mm<sup>2</sup> d. 1152 mm<sup>2</sup>
23. Good quality semen sample reduces methylene blue in ( )  
 a. 3 – 5 minutes b. 6 – 9 minutes  
 c. 10 – 15 minutes d. 16 – 20 minutes
24. Which of the following extender is used for room temperature preservation of bull semen ( )  
 a Coconut milk extender b. Tris egg yolk extender  
 c. Egg yolk citrate extender d. Egg yolk phosphate extender
25. Minimum concentration of spermatozoa required for one dose of frozen semen in horse is ( )  
 a 200 million b. 500 million  
 c. 1500 million d. 5000 million
26. Common type of tumor of penis in bulls ( )  
 a TVT b. Teratoma  
 c. Transmissible fibropappiloma d. Squamous cell carcinoma
27. Mediastinum testis is absent in which of the following species ( )  
 a Bull b. Ram  
 c. Stallion d. Boar
28. Sigmoid flexure is prescrotal in ( )  
 a Bull b. Ram  
 c. Boar d. Stallion
29. Vascular type of penis is present in ( )  
 a. Bull b. Ram  
 c. Boar d. Stallion
30. Erection of penis is brought about by action of the muscle ( )  
 a. Bulbocavernous b. Ischiocavernous

- |     |   |                                   |     |
|-----|---|-----------------------------------|-----|
|     | c. Retractor penis muscle   | d. Urethral muscle                |     |
| 31. | Internal reproductive organs of animals are developed from  |                                   | ( ) |
|     | a Ectoderm  | b Mesoderm                        |     |
|     | c Endoderm  | d All of the above                |     |
| 32. | Embryological structure which forms the glans penis in male and clitoris in female is                                   |                                   | ( ) |
|     | a Urogenital sinus  | b Genital tubercle                |     |
|     | c Mesonephric tubule  | d None of the above               |     |
| 33. | Which of the following agent produced by fetal testes causes differentiation and development of male reproductive tract |                                   | ( ) |
|     | a Fetal androgen  | b Mullerian Inhibiting Substance  |     |
|     | c Both  | d None of the above               |     |
| 34. | Pampiniform plexus is formed by   |                                   | ( ) |
|     | a Testicular artery   | b Testicular vein                 |     |
|     | c External pudendal artery  | d None of the above               |     |
| 35. | Shape of ruminant testis  |                                   | ( ) |
|     | a Round   | b Oval                            |     |
|     | c Spherical   | d Elliptical                      |     |
| 36. | Sertoli cells secrete   |                                   | ( ) |
|     | a Inhibin   | b Androgen Binding Protein        |     |
|     | c Estrogen  | d All of the above                |     |
| 37. | Accentrically placed thickening of the acrosome is known as   |                                   | ( ) |
|     | a Diadem defect   | b Acrosome cap                    |     |
|     | c Knobbed acrosome  | d Pseudodroplet defect            |     |
| 38. | Test used to know the functional integrity of sperm membrane is   |                                   | ( ) |
|     | a Cervical Mucus Penetration Test   | b Hypo Osmotic Swelling Test      |     |
|     | c Hamster Egg Penetration Test  | d High Temperature Viability Test |     |
| 39. | The length of seminiferous tubule in bull is  |                                   | ( ) |
|     | a 4000 meters   | b 5000 meters                     |     |
|     | c 6000 meters   | d 7000 meters                     |     |
| 40. | Only accessory sex gland present in dog   |                                   | ( ) |
|     | a Seminal vesicle   | b Bulbourethral gland             |     |
|     | c Prostate gland  | d Epididymis                      |     |
| 41. | Scrotal ligament is absent in   |                                   | ( ) |
|     | a Bull  | b Stallion                        |     |
|     | c Boar  | d Ram                             |     |

- 42 Urethral process is present in the penis of ( )  
 a Bull b Stallion  
 c Ram d Boar
- 43 The prostate gland is heart shaped in ( )  
 a Bull b Ram  
 c Stallion d Boar
- 44 Testosterone is converted to dihydrotestosterone by an enzyme known as ( )  
 a Aromatase b  $17\alpha$  Hydroxylase  
 c  $5\alpha$  reductase d  $5$  keto reductase
- 45 The following cells of the testis are highly sensitive to irradiation ( )  
 a Spermatozoa b Leydig cells  
 c Myoid cells d Sertoli cells
- 46 Sequence of male sexual behavior in bull is ( )  
 a Courtship to dismounting b Sexual arousal to dismounting  
 c Courtship to refractoriness d Sexual arousal to refractoriness
- 47 Courting grunts is observed in ( )  
 a Bull b Stallion  
 c Ram d Boar
- 48 In which of the following species, flagging movement of tail is exhibited after ejaculation ( )  
 a Bovine b Ovine  
 c Swine d Equine
- 49 Inability to protrude the penis outside the prepuce is called as ( )  
 a Phimosis b Paraphimosis  
 c Phallocampsis d Priapism
- 50 Inflammation of the glans penis and prepuce is ( )  
 a Balanitis b Gonitis  
 c Balanoposthitis d Penitis
- 51 Volume of semen in testicular degeneration is usually ( )  
 a Normal b Decreased  
 c Increased d None of the above
- 52 Total head abnormalities of bull semen samples should not exceed ( )  
 a 5 % b 10 %  
 c 15 % d 20 %

- 53 Semen picture of bilateral testicular hypoplasia ( )  
 a Normozoospermia b Necrozoospermia  
 c Aspermia d Azoospermia
- 54 Gynaeco mastia is caused due to ( )  
 a Seminoma b Leydig cell tumor  
 c Sertoli cell tumor d All of the above
- 55 Release of fully formed spermatozoa from Sertoli cells into lumen of seminiferous tubules is called ( )  
 a Spermiogenesis b Spermiation  
 c Emission d Ejaculation
- 56 Final concentration of glycerol in semen extender used for freezing of bull semen is ( )  
 a 1 % b 4 %  
 c 7 % D 14 %
- 57 Laparoscopic method of artificial insemination is commonly done in ( )  
 a Sheep b Goat  
 c Pig d Dog
- 58 Torsion of the descended testis is commonly seen in ( )  
 a Bull b Stallion  
 c Ram d Buck
- 59 Most reliable and commonly used seminal parameter in evaluating fertility of frozen semen in field condition is ( )  
 a Post thaw motility b Post thaw livability  
 c post thaw acrosomal integrity d HOST
- 60 The required number of progressive motile sperms during filling and sealing of French mini straw in cattle is ( )  
 a 5 millions b 10 millions  
 c 20 millions d 40 millions
61. Urethral diverticulum is present in ( )  
 a. Bull b. Ram  
 c. Stallion d. Boar
62. The body of the prostate gland is absent in ( )  
 a. Bull b. Ram  
 c. Stallion d. Boar
63. The optimum frequency of semen collection from adult bulls in frozen semen bank is ( )  
 a One ejaculate twice a week b Two ejaculates once a week

- |  |  |     |
|--|--|-----|
| <p>64. The preputial ring is present in</p> <p>a Bull</p> <p>c Stallion</p>  | <p>d Two ejaculates thrice a week</p> <p>b Ram</p> <p>d Boar</p> | ( ) |
| <p>65. Average velocity of bull sperm cell is</p> <p>a 1.65 mm/minute</p> <p>c 0.50 mm/minute</p>  | <p>b 4.23 mm/minute</p> <p>d 3.50 mm/minute</p>                  | ( ) |
| <p>66. Aspermia denotes</p> <p>a Non volume</p> <p>c Decreased sperm</p>   | <p>b Zero sperm</p> <p>d Increased sperm</p>                     | ( ) |
| <p>67. Inflammation of hip joint – coxitis- is seen most commonly in</p> <p>a Dogs</p> <p>c Stallion</p>                                     | <p>b Bull</p> <p>d Buck</p>                                      | ( ) |
| <p>68. In ram, Balanoposthitis is also known as</p> <p>a Pizzle rot</p> <p>c Rain bow</p>  | <p>b Phallocampsis</p> <p>d Crampiness</p>                       | ( ) |
| <p>69. Increased concentration of sperm is termed as</p> <p>a Azoospermia</p> <p>c Teratozoospermia</p>                                      | <p>b Polyzoospermia</p> <p>d Hyperspermia</p>                    | ( ) |
| <p>70. Seminal plasma is slightly alkaline in</p> <p>a Bull and Ram</p> <p>c Ram and stallion</p>  | <p>b Bull and Boar</p> <p>d Boar and stallion</p>                | ( ) |
| <p>71. Formation of primary and secondary spermatocyte from type A spermatogonia is</p> <p>a Spermatocytogenesis</p> <p>c Spermiogenesis</p> | <p>b Spermateliosis</p> <p>d Spermeation</p>                     | ( ) |
| <p>72. Normal volume of semen in boar is</p> <p>a 25-50 ml</p> <p>c 1-15 ml</p>  | <p>b 125-500 ml</p> <p>d 50-75 ml</p>                            | ( ) |
| <p>73. Sperm concentration in Ram semen is</p> <p>a 2000-4000 million/ml</p> <p>c 200-400 million/ml</p>                                     | <p>b 800-1200 million/ml</p> <p>d 100-150 million/ml</p>         | ( ) |

74. Total length of spermatozoa of domestic animal is ( )  
 a 10-20 microns b 20-40 microns  
 c 50-70 microns d 75-90 microns
75. Reaction time has co-relation with ( )  
 a Sex drive b Motility of sperm  
 c Fertility of sperm d Concentration of sperm
76. Anti-agglutinin present in semen is secreted by ( )  
 a Ampulla b Seminal vesicle  
 c Prostate gland d Cowper's gland
77. An animal in which pheromones are secreted in saliva ( )  
 a Bull b Stallion  
 c Boar d Ram
78. Static / zero ejaculates are common in ( )  
 a Bull b Buffalo bull  
 c Stallion d Boar
79. Prostatitis is common in ( )  
 a Bull b Boar  
 c Stallion d Dog
80. Pederasty or rectal copulation as a vices is common in ( )  
 a Bull b Boar  
 c Stallion d Buck
81. An example of impotentia coeundi ( )  
 a Rainbow penis b Testicular hypoplasia  
 c Seminal vesiculitis d Orchitis
82. Epididymal sperm transit period in bull is ( )  
 a 10 days b. 13 days  
 c 15 days d. 17 days
83. The terminal part of penis contains several spines in ( )  
 a. Dog b. Ram  
 c. Cat d. Boar

84. Volume of French medium straw is ( )  
 a. 0.25 ml b. 0.50 ml  
 c. 0.75 ml d. 1.00 ml
85. The tight coiling of tail over mid piece of the sperm is termed as ( )  
 a. Diadem defect b. Cork screw  
 c. Knobbed sperm d. Dag defect
86. Stretching of head and neck as post coital reaction is seen ( )  
 a. Bull b. Ram  
 c. Buck d. Stallion
87. A nuclear sperm defect is ( )  
 a. Diadem defect b. Cork screw defect  
 c. Knobbed sperm defect d. Dag defect
88. A reversible testicular disorder ( )  
 a. Hypoplasia b. Fibrosis  
 c. Atrophy d. Degeneration
89. Veneral bacterial disease in which the bull act as symptomless carrier ( )  
 a. Trichomoniasis b. Vibriosis  
 c. Brucellosis d. All of the above
90. Temperature of thawing media for frozen semen ( )  
 a. 37°C b. 50°C  
 c. 25°C d. 45°C
91. Dribblings in bull, before attempting a mount are secretions from ( )  
 a. Vesicular glands b. Cowper's gland  
 c. Prostate gland d. Ampulla
92. The most common testicular tumor in dog ( )  
 a. Sertoli cell tumor b. Interstitial cell tumors  
 c. Seminoma d. Melanoma
93. Active principle in egg yolk, which acts as an cryoprotective agent is ( )  
 a. Phosphorus b. Calcium  
 c. Lecithin d. Vitamins





Answer key

Question No.	Answer	Question No.	Answer	Question No.	Answer	Question No.	Answer
1	b	26	c	51	a	76	c
2	d	27	c	52	a	77	c
3	b	28	c	53	d	78	b
4	c	29	d	54	c	79	d
5	d	30	b	55	b	80	b
6	c	31	b	56	c	81	a
7	a	32	b	57	a	82	a
8	d	33	c	58	b	83	c
9	d	34	b	59	a	84	b
10	d	35	b	60	c	85	d
11	a	36	d	61	c	86	b
12	c	37	c	62	b	87	a
13	d	38	b	63	c	88	d
14	b	39	b	64	c	89	b
15	d	40	c	65	b	90	a
16	c	41	a	66	a	91	b
17	c	42	c	67	a	92	b
18	d	43	d	68	a	93	c
19	b	44	c	69	b	94	c
20	b	45	a	70	d	95	c
21	c	46	d	71	a	96	c
22	b	47	d	72	b	97	b
23	a	48	d	73	a	98	a
24	a	49	a	74	c	99	a
25	c	50	c	75	a	100	a

## VETERINARY MICROBIOLOGY

### Veterinary Virology

1. FMD virus serotypes in India are
 

a O, A and C	c O, A, C, Asia1
b O, A and Asia1	d O, A and SAT
2. EDS virus belongs to the genus
 

a Aviadenovirus	c Siadenovirus
b Adenovirus	d Atadenovirus
3. Ephemeral fever is also known as
 

a 3-day fever	c both a and b
b Stiff sickness	d none of the above
4. Severe vomition, grey foul-smelling diarrhea and gastro enteritis in pups are characteristics of
 

a Parvo virus infection	c Infectious canine hepatitis
b Canine distemper	d Rabies
5. Rabies virus belongs to the genus
 

a Vesiculovirus	c Adenovirus
b Lyssavirus	d Novirhabdovirus
6. New castle Disease virus can be isolated in embryonated chicken eggs by which route of inoculation
 

a CAM	c yolk sac
b amniotic	d allantoic
7. Pump handle respiration is a typical clinical sign observed in
 

a Infectious laryotracheitis	c Infectious bronchitis
b Avian influenza	d New castle Disease
8. Herpes virus of turkey is used as a vaccine for
 

a Marek's disease	c IBR
b ILT	d none of the above
9. Swine fever virus can be propagated in
 

a MDBK	c primary pig kidney cells
b Vero	d primary calf kidney cells
10. Big liver disease is caused in
 

a ILT	c Avian leucosis complex
b MD	d ND
11. Equine encephalitis virus belongs to the family
 

a Birnaviridae	c Flaviviridae
b Togaviridae	d Calciviridae
12. The following virus families have segmented genome
 

a Reoviridae	c Bunyaviridae
b Birnaviridae	d All the above
13. The following viruses are neurotrophic viruses
 

a Rabies virus	c Both a & b
b Aujeszky's disease virus	d None of the above

14. 'pol' gene in retroviruses encode for  
 a Reverse transcriptase c Both a & b  
 b Integrase d None of the above
15. The following cytopathic effects are seen in the PPR infection  
 a Acidophilic intracytoplasmic inclusion body formation c Inclusion bodies both in cytoplasm & in nucleus  
 b Syncytial formation d All the above
16. Persistent infection is seen in  
 a Equine infectious anaemia c Rinderpest  
 b Maedi-visna d a & b only
17. Viruses having herring bone appearance of ribonucleoprotein  
 a African horse sickness c Equine infectious anaemia  
 b Equine influenza d None of the above
18. Lentogenic strain of Newcastle disease virus  
 a komorow c Hertz  
 b Milano d LaSota
19. An example of cubical symmetry virus  
 a Orthomyxoviridae c Paramyxoviridae  
 b Rhabdoviridae d Picorna viridae
20. Hard pad disease is caused by  
 a Morbilivirus c Parvovirus  
 b Adenovirus d rotavirus
21. Which of the following is the smallest virus?  
 a Coronaviridae c Toraviridae  
 b Arteriviridae d Circoviridae
22. Which of the following is not antigenically related to other three viruses?  
 a Rinderpest c Mumps  
 b Canine distemper virus d Measles
23. In which infection corneal opacity in dogs may develop?  
 a Canine distemper c Canine parvovirus  
 b Rabies d Infectious canine hepatitis
24. Which of the following is the vaccine strain of Infectious Bronchitis?  
 a Mukteswar strain c Massachusetts strain  
 b LaSota d R2B
25. Which of the following is the biological vector in transmission of African swine fever?  
 a *Culicoides* sp. c Both a and b  
 b *Ornithodoros* sp. d None of the above
26. Milker's nodule is caused by  
 a Capripox c Parapox  
 b Cowpox d Suipox
27. Predilection site for parvovirus is  
 a Bone marrow c Enteric epithelium  
 b Foetus d All the above

28. Cup shaped depressions are seen in the surface of
- a    Calcivirus
  - b    Togavirus
  - c    Picorna virus
  - d    Parvovirus
29. Antigenic shift is more common in
- a    Orthomyxo viruses
  - b    Arena viruses
  - c    Bunya viruses
  - d    All the above
30. The following poxviruses are antigenically related except
- a    Cowpox
  - b    Lumpy skin disease virus
  - c    Sheep pox
  - d    Goat pox

**ANSWER KEYS**

<b>1.</b>	<b>c</b>	<b>13.a</b>	<b>25.b</b>
<b>2.</b>	<b>d</b>	<b>14.a</b>	<b>26.b</b>
<b>3.</b>	<b>a</b>	<b>15.b</b>	<b>27.c</b>
<b>4.</b>	<b>b</b>	<b>16.c</b>	<b>28.a</b>
<b>5.</b>	<b>b</b>	<b>17.d</b>	<b>29.a</b>
<b>6.</b>	<b>b</b>	<b>18.c</b>	<b>30.b</b>
<b>7.</b>	<b>a</b>	<b>19.a</b>	
<b>8.</b>	<b>a</b>	<b>20.a</b>	
<b>9.</b>	<b>c</b>	<b>21.d</b>	
<b>10.</b>	<b>c</b>	<b>22.a</b>	
<b>11.</b>	<b>c</b>	<b>23.d</b>	
<b>12.</b>	<b>d</b>	<b>24.c</b>	

**General Veterinary Microbiology and Immunology**

1. The largest immunoglobulin molecule  
a) Ig E b) Ig D c) Ig M d) Ig A
2. The bacteria which grow best at temperature 70<sup>0</sup>C is called as  
a) Mesophiles b) Thermophiles c) Hyperthermophiles d) Halophiles
3. The bacteria require low level of oxygen for growth is known as  
a) Aerobes b) Anaerobes c) Microaerophiles d) Obligate anaerobes
4. Who discovered first antibiotic *penicillin*  
a) Ignaz Semmelweis b) Alexander Fleming c) Paul Ehrlich d) Gerd Binnig
5. Cells divide in one plane and remain attached predominantly in pairs.  
a) Tetracocci b) Diplococci c) Streptococci d) Gerd Binnig
6. Cells are lined up side by side like match sticks and at angles to one another  
a) Streptobacilli b) Trichomes c) Palisade d) Diplobacilli
7. Bacteria with less than one complete twist or turn are called  
a) Spirochetes b) Mycelia c) Spirilla d) vibrioid
8. Endospores can be stained by  
a) Schaffer-Fulton stain b) Grams stain c) Acid fast stain d) None
9. Which bacterial growth phase the cells are dividing regularly by binary fission and cell numbers increase in geometric progression.  
a) Lag Phase b) log phase c) Stationary phase d) Decline Phase
10. Bacteria that require low level (5-10%) carbon dioxide for growth.  
a) Aerobic b) Anaerobic c) Microaerophilic d) Capnophilic
11. Salt loving bacteria are called  
a) Acidophiles b) osmophile c) Halophile d) xerophile
12. Bacteria that that utilise light as energy source  
a) chemotrophs b) chemolithotrophs c) phototroph d) chemoorganotrophs
13. The total energy yield from complete oxidation of glucose is  
a) 24 ATP b) 38 ATP c) 18 ATP d) 6 ATP

14. The media contains agar at a concentration of 0.2-0.5 percent is called  
a) Liquid media    b) Solid media    c) Semisolid media    d) None
15. An epidemic disease condition affecting a large geographical area or often on a global scale  
a) Epidemic    b) Endemic    c) Sporadic    d) Pandemic
16. The organism lives on the host without causing any disease.  
a) Saprophytism    b) Commensalism    c) Symbiosis    d) Parasitism
17. Presence of toxins in blood  
a) Bacteraemia    b) Septicaemia    c) Toxaemia    d) Anemia
18. The percentage of Peptidoglycan in gram positive bacterial cell wall  
a) 80%    b) 10%    c) 20%    d) 5%
19. Mutations involving one or very few base pairs  
a) Point mutation    b) missense mutation    c) nonsense mutation    d) silent mutation
20. Transfer of genetic material from one bacterium to another with a help of bacteriophage (Bacterial virus ) is known as  
a) Recombination    b) Transformation    c) Transduction    d) Conjugation
21. The media used for isolation of fungi are  
a) Malt agar    b) Potato dextrose agar  
c) Sabouraud's dextrose agar    d) All the above
22. Wood lamp uses which rays for identification of fungus in the hair  
a) IR rays    b) UV rays    c) Both a and b    d) None
23. Bacteria are measured in terms of  
a) Millimeter    b) Meter    c) Micrometer    d) Nanometer
24. Virus structure can be studied by  
a) Light microscope    b) Electron microscope    c) Fluorescent microscope    d) None
25. The movement of bacteria directed towards or away from chemical compounds are known as  
a) Phototaxis    b) Chemotaxis    c) Magnetotaxis    d) All the above
26. The protein coat that covers the nucleic acid of the infectious virus particle is known as  
a) Virion    b) Viriod    c) Capsomere    d) Capsid

27. Plasmids that contain genes that code for antibiotic resistance.  
 a) Colicinogenic factors b) Fertility factor c) Resistance factor d) None
28. The specialized convoluted invagination of the cytoplasmic membrane and is more prominent in Gram-negative bacteria.  
 a) Ribosomes b) Mesosomes c) Magnetosomes d) Nucleosome
29. The enzyme involved in replication of bacterial DNA is/are  
 a) DNA polymerase b) DNA helicase c) Both a and b d) None
30. The ability of viruses to agglutinate RBC is known as  
 a) Haemagglutination b) Haemadsorption c) Haemolysis d) Haemoptysis

**ANSWER KEYS**

<b>1.</b>	<b>c</b>	<b>13.a</b>	<b>25.b</b>
<b>2.</b>	<b>b</b>	<b>14.b</b>	<b>26.d</b>
<b>3.</b>	<b>c</b>	<b>15.d</b>	<b>27.c</b>
<b>4.</b>	<b>b</b>	<b>16.b</b>	<b>28.b</b>
<b>5.</b>	<b>b</b>	<b>17.c</b>	<b>29.a</b>
<b>6.</b>	<b>c</b>	<b>18.a</b>	<b>30.b</b>
<b>7.</b>	<b>c</b>	<b>19.b</b>	
<b>8.</b>	<b>a</b>	<b>20.d</b>	
<b>9.</b>	<b>b</b>	<b>21.c</b>	
<b>10.</b>	<b>d</b>	<b>22.b</b>	
<b>11.</b>	<b>c</b>	<b>23.c</b>	
<b>12.</b>	<b>c</b>	<b>24.b</b>	



**General Veterinary Microbiology and Immunology**

1. Club colony formation is seen in
  - a. *Botryomyces*
  - b. *Arcanobacterium pyogenes*
  - c. *Actinomyces bovis*
  - d. Both a and b
2. Exudative epidermitis of pig is caused by
  - a. *S.aureus*
  - b. *S.hyicus*
  - c. *S.intermedius*
  - d. *S.epidermitidis*
3. For decontamination of specimen to eliminate fast growing bacteria to isolate M.bovis
  - a. 2-4 % sodium hydroxide
  - b. 1% Sodium carbonate
  - c. 3% phenol
  - d. 2.5% glutaraldehyde
4. Ascoli test is used to diagnose
  - a. Anthrax
  - b. Brucellosis
  - c. Mastitis
  - d. Wingrot
5. Swarming of agar plates is by
  - a. *Proteus spp*
  - b. *Staphylococcus spp*
  - c. *Streptococcus spp*
  - d. *E.coli*
6. *Candida albicans* is the causative agent for
  - a. Thrush
  - b. Woolsorters disease
  - c. Ringworm psoriasis
  - d. Weils disease
7. Bipolar appearance of organisms is specific for
  - a. *Pasteuralla spp*
  - b. *Brucella spp*
  - c. *E.coli*
  - d. *Mycobacterium spp*
8. The zebra markings in large intestine of affected animals are noticed in
  - a. Johne' s disease
  - b. SMEDI
  - c. PPR
  - d. FMD

9. Myocarditis in young calves noticed in  
a. FMD  
b. Blue Tongue  
c. Tuberculosis  
d. Calf scour
10. The media used for isolation of fungi are  
a) Malt agar  
b) Potato dextrose agar  
c) Sabouraud's dextrose agar  
d) All the above
11. Living together of two or more species of organisms for mutual benefit is called as  
a) Commensals b) Symbiosis c) Antibiosis d) Parasitism
12. Rhizoids are root like structures in fungus produced by  
a) Rhizopus b) Mucor c) Absidia d) All
13. Fungal media should have the following properties to promote the fungal growth than bacterial growth  
(a) Medium sugar with neutral pH (b) High sugar with alkali pH  
(c) Low sugar with acidic pH (d) High sugar with acidic pH
14. Hjarre's disease in poultry is caused by  
(a) *Salmonella pullorum* (b) *E.coli* (c) *Pseudomonas* (d) *Salmonella gallinarum*
15. Lumpy jaw in cattle is caused by  
(a) *Actinobacillus lignieresii* (b) *Actinomyces bovis* (c) *Salmonella*  
(d) *E.coli*
16. *Clostridium perfringens* type D in lambs and kids cause  
(a) Pulpy kidney disease (b) Lamsiekte (c) Limber neck (d) Braxy
17. Chinese letter or Cuneiform arrangement is characteristic of  
(a) *Cryptococcus* (b) *Pseudomonas* (c) *Corynebacteria* (d) *Salmonella*
18. Shiga like toxins cause a disease in pigs called  
(a) Diamond skin disease (b) Odema disease (c) Dysentery (d) Pulpy kidney disease
19. Biovin antigen of *Salmonella* is called as  
(a) H antigen (b) Vi antigen (c) O antigen (d) F antigen
20. Among the following which one is non capsulated and motile  
(a) *E.coli* (b) *Cl.tetani* (c) *Cl.perfringens* (d) *Cl.botulinum*
21. Which among the following is lactose non-fermenter  
(a) *Citrobacter* (b) *Enterobacter aerogenes* (c) *Salmonella* (d) *E.coli*

22. Among the following which is coagulase producing organism?  
(a) Streptococcus (b) Enterococcus (c) Staphylococcus (d) Micrococcus
23. Among the following which one is string test positive and non-motile?  
(a) E.coli (b) Klebsiella (c) Enterobacter aerogenes (d) Proteus
24. Diamond skin disease is caused by  
(a) Enterobacter aerogenes (b) Proteus (c) Erysipelas (d) Enterococcus
25. Lumpy jaw can be diagnosed by direct examination of  
(a) Sulphur granules (b) Grayish-white granules (c) Silver granules (d) None of the above
26. Which among the following can be used to demonstrate fungal elements in tissue sections?  
(a) Periodic acid-Schiff (PAS) (b) Gram staining (c) Modified Ziehl-Neelsen  
(d) India ink
27. The caseous lymphadenitis in sheep is caused by  
(a) Mycoplasma gallisepticum (b) Corynebacterium pseudotuberculosis  
(c) C.renale (d) Aspergillus flavus
28. Bovine farcy is caused by  
(a) A.bovis (b) A.ligneri (c) N.farcinica (d) None of the above
29. Pasteurella multocida type A causes  
(a) Fowl typhoid (b) Infectious coryza (c) Fowl cholera (d) None of the above
30. Sleepy foal disease is caused by  
(a) A.equuli (b) C.novyi type B (c) Listeria (d) All the above
31. In gelatin stab culture *E.rhusiopathiae* produce growth of  
(a) Inverted fir tree appearance (b) dark egg yolk appearance (c) bottle brush appearance  
(d) All of the above
32. Isolation of Listeria require a process called  
(a) Salt enrichment (b) Heat enrichment (c) Cold enrichment (d) All of the above
33. Braxy in sheep is caused by  
(a) Cl.hemolyticum (b) Cl.septicum (c) Cl.chauvoei (d) All the above
34. The only live spore vaccine for animal bacterial disease used is for  
(a) Anthrax (b) Rabies (c) Enterotoxaemia (d) Black quarter
35. A tuft of flagella present at one end of bacteria is called as  
(a) Amphitrichous (b) Lophotrichous (c) Peritrichous (d) Atrichous
36. Father of Bacteriology is  
(a) Antony Van Leeuwenhoek (b) Louis Pasteur (c) Metchnikoff (d) Lister

37. The word ending for order of a family in bacterial classification is called as

- (a) ales (b) *oid* (c) eles(d) *caea*

38. A strain with special biochemical or physiological properties is called as

- (a) serovar (b)pathovar(c) biovar(d) *phagewar*

39. The DNA is associated at one point with an invagination of cell membrane is called

- a) mesosome b) phagosome c) chondroitin d) mitochondria

40. In pneumococcus (*Streptococcus pneumoniae*), the techoic acids bears the antigenic determinants

- a) Frossman antigen b)Heterophile antigen c)Multi antigen d) antigenic membrane

**ANSWER KEYS**

1.	a	13.b	25.a	37.a
2.	b	14.b	26.a	38.c
3.	d	15.b	27.b	39.a
4.	a	16.a	28.c	40.a
5.	a	17.c	29.c	
6.	a	18.a	30.a	
7.	a	19.b	31.c	
8.	a	20.a	32.c	
9.	a	21.a	33.b	
10.	c	22.c	34.a	
11.	a	23.b	35.b	
12.	c	24.c	36.a	

## VETERINARY PARASITOLOGY

## General Parasitology and Veterinary Helminthology

1. In *Dicrocoelium dendriticum*, egg hatches in the
  - a) Water
  - b) Definitive host
  - c) Intermediate host
  - d) Soil
2. Laying of leathery eggs in chicken is associated with
  - a) *Heterakis gallinarum*
  - b) *Raillietina* spp.
  - c) *Prosthogonimus* spp.
  - d) *Syngamus trachea*.
3. The secondary complication of acute fasciolosis in sheep is
  - a) Enterotoxaemia
  - b) Black disease
  - c) Foot rot
  - d) Blue tongue
4. The metacercaria of *Fasciolopsis buski* found in
  - a) Water chest nuts
  - b) Leaves of waterplants
  - c) Grass blades
  - d) Water melons
5. An amphistome found in the liver is
  - a) *Gigantocotyle explanatum*
  - b) *Gastrothylax* spp.
  - c) *Paramphistomum cervi*
  - d) *Cotylophorans* spp.
6. Traumatic hepatitis in lambs occurs in
  - a) Acute fasciolosis

- b) Amphistomosis
  - c) *Cysticercustenuicolis*
  - d) a and c
7. The cercaria of Schistosomes is called as
- a) *Gymnocephalus cercaria*
  - b) *Xiphidiocercus cercaria*
  - c) *Furcocercus cercaria*
  - d) *Lobocercus cercaria*
8. The mode of infection in Schistosomiasis is
- a) Skin penetration by cercaria
  - b) Ingestion of metacercaria along with feed
  - c) Ingestion of infected intermediate host
  - d) None of the above.
9. Lambs infected with *Moniezia* spp. are predisposed to
- a) Enterotoxaemia
  - b) Black disease
  - c) Black Quarter
  - d) Johne's disease
10. A cestode which causes nodules in the small intestine of sheep is
- a) *Moniezia expansa*
  - b) *Moniezia benedeni*
  - c) *Stilesia globipunctata*
  - d) *Avitellina* spp.
11. The most pathogenic cestode of poultry is
- a) *Raillietina echinobothridia*
  - b) *Davainea proglottina*
  - c) *Choanotaenia fundibulum*
  - d) *Cotugniadigonopora*
12. Nodular taeniasis in poultry is caused by
- a) *Raillietina echinobothridia*

- b) *Raillietinatetragona*
  - c) *Amoebotaeniasphenoides*
  - d) *Cotugniadigonopora*
13. Anal pruritus in dog is caused by
- a) *Dipylidiumcaninum*
  - b) *Echinococcusgranulosus*
  - c) *Taeniahydatigena*
  - d) *Taeniamulticeps*
14. Intermediate host of *Dipylidium caninum*is
- a) Dog flea
  - b) *Hippoboscamaculata*
  - c) *Demodex* spp.
  - d) *Rhipicephalussanguineous*
15. Neurocysticercosis in man is caused by
- a) Hydatid cyst
  - b) *Cysticercuscellulosae*
  - c) *Cysticercusbovis*
  - d) *Coenuruscerebralis*
16. Hepatitis cysticercosa in lambs is caused by
- a) *Cysticercustenuicolis*
  - b) *Cysticercusovis*
  - c) *Strobilocercus*
  - d) *Coenuruscerebralis*
17. Gid in sheep is caused by
- a) Hydatid cyst
  - b) *Coenuruscerebralis*
  - c) *Cysticercustenuicolis*
  - d) *Tetrathyridium*
18. 'Milk spots' in the liver of swine is causedby
- a) *Ascaris suum*

- b) *Stephanurus dentatus*  
c) *Macrocanthorhynchus hirudinaceus*  
d) *Metastrongylus longates*
19. Anal pruritus in horse is caused by  
a) *Oxyuris equi*  
b) *Strongylus vulgaris*  
c) *Habronema* spp.  
d) *Anoplocephala perfoliata*
20. The largest poultry nematode is  
a) *Syngamus trachea*  
b) *Ascaridia galli*  
c) *Capillaria annulata*  
d) *Tetrameress* spp.
21. A hormone responsible for activation of dormant larvae in *Toxocara* spp is  
a) Follicular stimulating hormone  
b) Prolactin  
c) Oxytocin  
d) Adrenalin
22. In sheep, introduction of “**foot rot**” organism is associated with  
a) *Bunostomum trigonocephalum*  
b) *Oesophagostomum columbianum*  
c) *Strongyloides papillosus*  
d) *Dictyocaulus filaria*
23. A nematode that associated with nodule formation in the intestine of buffalo is  
a) *Oesophagostomum radiatum*  
b) *Paracooperia nodulosa*  
c) *Trichostrongylus colubriformis*  
d) *Ostertagia ostertagi*
24. Self cure phenomenon in sheep is associated with  
a) *Haemonchus contortus*



- b) *Trichostrongylus axei*  
c) *Nematodirus pathiger*  
d) *Dictyocaulus filarial*
25. A fungus which plays a major role in the dissemination (spreading) of lung worm larvae on to the pastures is
- a) *Pilobolus* spp.  
b) *Arthrobotrysoligospora*  
c) *Duddingtonia flagrans*  
d) *Baevaria* spp.
26. The intermediate host of *Metastrongylus elongatus* is
- a) Earthworm  
b) Slug  
c) Snail  
d) Grasshopper
27. In Swine, introduction of swine influenza virus is associated with
- a) *Stephanurus dentatus*  
b) *Strongyloides* spp.  
c) *Metastrongylus elongatus*  
d) *Macrocanthorhynchus* spp.
28. *Habronema* spp. in horse is causing
- a) Summer sore  
b) Hump sore  
c) Kumri  
d) Haemorrhagic nodules
29. Eye worm of cattle is
- a) *Thelazia rhodesii*  
b) *Thelazia callipaeda*  
c) *Setaria digitata*  
d) *Setaria cervi*
30. Oesophageal tumour in dog is associated with
- a) *Dirofilaria immitis*

- b) *Ancylostomacanthum*  
c) *Spirocercalupi*  
d) *Dioctophymarenale*
31. Haemorrhagic nodules on the skin of cattle is due to  
a) *Parafilariaabovicola*  
b) *Onchocercagutturosa*  
c) *Stephanofilariaassamensis*  
d) *Hypodermaspp*
32. Cerebrospinal nematodiasis in horse is caused by  
a) *Thelaziarhodesii*  
b) *Habronemaspp.*  
c) *Parafilariaabovicola*  
d) *Setariadigitata*
33. "Hump sore" in cattle is caused by  
a) *Stephanofilariaassamensis*  
b) *Parafilariaabovicola*  
c) *Stephanofilariazaheeri*  
d) *Stephanofilariastilei*
34. Verminous dermatitis or Cascado is caused by  
a) *Stephanofilariaspp.*  
b) *Onchocercaspp.*  
c) *Setariaspp.*  
d) *Parafilariaspp.*
35. The intermediate host of *Dracunculus medinensis*  
a) Cyclops  
b) Crab  
c) Snail  
d) Slugs
36. Worm nest in cattle is caused by  
a) *Stephanofilariaspp.*

- b) *Parafilaria*spp.  
c) *Onchocerca* spp.  
d) *Setaria*spp.
37. Nutrition and handling of waste products of larval stage of *Trichinella spiralis* is governed by
- a) NK cells  
b) Nursecells  
c) Flamecells  
d) Antigen presenting cells
38. Whip worm of Sheep is
- a) *Oxyuris* spp.  
b) *Mecistocirrus digitatus*  
c) *Trichuris ovis*  
d) *Cysticercus ovis*
39. Pin worm of equine is
- a) *Oxyuris equi*  
b) *Strongylus vulgaris*  
c) *Strongylus equi*  
d) *Gastrophilus equi*
40. Visceral larva migrans in humans is caused by larva of
- a) *Ancylostoma caninum*  
b) *Toxocara canis*  
c) *Habronema majus*  
d) *Dirofilaria immitis*
41. Thorny headed worm of swine is
- a) *Ascaris suum*  
b) *Macrocanthorhynchus hirudinaceus*  
c) *Stephanurus dentatus*  
d) *Metastrongylus longates*

42. *Trichinella spiralis* cyst can be detected by using
- Phase contrast microscope
  - Fluorescent microscope
  - Trichinoscope
  - Stethoscope
43. Temporary relationship between two organisms, wherein one organism transports
- Symbiosis
  - mutualism
  - phoresy
  - commensalism
44. Immunity to superinfection due to the presence of residual parasite is termed
- acquired immunity
  - innate immunity
  - premunity
  - sterile immunity
45. A parasite which lead a parasitic way of life only for a short period during its life span is
- temporary parasite
  - aberrant parasite
  - obligatory parasite
  - permanent parasite
45. The host which transfers the infective agent without any development in its body is called as
- Paratenic host
  - Transport host
  - Intermediate host
  - Reservoir host
46. An organism which parasitized an organ which is not its natural habitat
- Incidental parasite
  - Ectopic/Aberrant/Erratic parasite
  - Accidental parasite
  - Occasional parasite
47. Host which harbours larval stages of parasite often encapsulated or encysted in its tissue and remains infective to definitive host without any further development is called as

- (A) Paratenic host  
 (B) Transport host  
 (C) Definitive host  
 (D) Intermediate host
48. A parasite, which parasitizes the host which is not its actual definitive host is called  
 (A) Incidental parasite  
 (B) Stenoxenous parasite  
 (C) Obligatory parasite  
 (D) Periodic parasite
49. An organism which derives benefits from the host, but the host experiences neither benefited nor harmed is called as  
 (A) Parasite  
 (B) Commensal  
 (C) Symbiont  
 (D) Mutualist
50. The association between Sea anemone and crabs is an example for  
 (A) Symbiosis  
 (B) Parasitism  
 (C) Mutualism  
 (D) Commensals

**Answers (General and Vet. Helminthology):**

1. C	11. B	21.B	31.A	41. B
2. C	12. A	22.C	32.D	42. C
3. B	13. A	23.B	33.A	43. C
4. A	14. A	24.A	34.A	44. C
5. A	15. B	25.A	35.A	45. B
6. C	16. A	26.A	36.C	46. B
7. C	17. B	27.C	37.B	47. A
8. A	18. A	28.A	38.C	48. A
9. A	19. A	29.A	39.A	49. B
10. C	20. B	30.C	40.B	50. C

**Veterinary Entomology and Veterinary Protozoology**

1. Fly species having piercing and sucking type of mouthparts, humped thorax and reported from Nilgiris and Palani hills of Tamil Nadu is
  - a) *Culicoides*
  - b) *Simulium*
  - c) *Glossina*
  - d) *Pseudolynchia*
2. 'Stick tight flea' affecting poultry
  - a) *Lipeurus caponis*
  - b) *Echidnophaga gallinacea*
  - c) *Xenopsylla cheopis*
  - d) *Tunga penetrans*
3. Which among the following statements is FALSE ?
  - a) only female mosquitoes suck blood from humans
  - b) *Simulium* flies lay eggs usually in streams/ running water
  - c) both male and female *Phlebotomus* flies suck blood from humans
  - d) both male and female *Stomoxys* flies suck blood from horses
4. *Tritrichomonas foetus* infection in cattle leads to
  - a) abortion at early stage of gestation
  - b) abortion at mid stage of gestation
  - c) abortion at last stage of gestation
  - d) birth of calf with defective limbs
5. Which among the following statements is TRUE ?
  - a) *Histomonas meleagridis* transmitted through eggs of *Heterakis gallinarum*
  - b) Blue tongue virus is transmitted by *Culex* mosquito
  - c) Nymphal stages are absent in life cycle of ticks
  - d) Mule's operation is done for control of ticks in sheep
6. Which is the CORRECT order of veins in wing venation of insects ?
  - a) costal vein, subcostal vein, cubital vein, radial vein, median vein, anal vein
  - b) costal vein, subcostal vein, cubital vein, median vein, radial vein, anal vein
  - c) costal vein, subcostal vein, radial vein, median vein, cubital vein, anal vein
  - d) costal vein, subcostal vein, median vein, radial vein, cubital vein, anal vein
7. 'Scaly leg' condition in fowl is caused by
  - a) *Cnemidocoptes gallinae*
  - b) *Cnemidocoptes pilae*
  - c) *Cnemidocoptes mutans*
  - d) *Dermanyssus gallinae*
8. Second pair of wings of insects are modified into balancing structures called as
  - a) Halteres
  - b) Sclerites
  - c) Pulvillus
  - d) Sensillum
9. A pentastomid group 'Tongue worm' present in nasal passage of dogs is
  - a) *Linguatula serrata*
  - b) *Spirocerca lupi*

- c) *Dipylidium caninum*  
d) *Oncicola canis*
10. Which one among these is a CORRECT MATCH ?  
a) Bots - *Gasterophilus* larva, Grub - *Hypoderma* larva, Nits - lice eggs, seed tick - larva of tick  
b) Bots - *Gasterophilus* larva, Grub - *Hypoderma* larva, Nits - lice eggs, seed tick - adult tick  
c) Bots - *Hypoderma* larva, Grub - *Gasterophilus* larva, Nits - tick eggs, seed tick - larva of tick  
d) Bots - *Hypoderma* larva, Grub - *Gasterophilus* larva, Nits - tick eggs, seed tick - adult tick
11. Which fly can pass through the commercially available mosquito nets?  
a) *Melophagus ovinus*                      b) *Hippobosca maculata*  
c) *Haematobia irritans*                      d) *Culicoides fulvithorax*
12. Larval stages of ticks will have  
a) 2 pairs of legs    b) 3 pairs of legs    c) 4 pairs of legs    d) legs are absent
13. Protozoan parasite transmitted by crop milk to young pigeons  
a) *Histomonas meleagridis*              b) *Tetratrichomonas gallinarum*  
c) *Trichomonas gallinae*                  d) *Cryptosporidium meleagridis*
14. Which of the following is a bilaterally flattened parasite ?  
a) Lice    b) Flea    c) Tick    d) Mite
15. 'Red mange' is caused by  
a) *Notoedres cati*                      b) *Demodex canis*  
c) *Sarcoptes scabiei*                  d) *Psoroptes cuniculi*
16. 'Long nosed cattle louse' is  
a) *Haematopinus suis*                  b) *Solenoptes capilatus*  
c) *Damalinia ovis*                      d) *Linognathus vituli*
17. 'Green bottle blow fly' is  
a) *Musca autumnalis*    b) *Lucilia cuprina*    c) *Sarcophaga*    d) *Haematobia irritans*
18. Hard tick resembling the seed of castor beans, so called as 'castor bean tick' is  
a) *Ixodes ricinus*                      b) *Dermacentor variabilis*  
c) *Amblyomma hebraeum*              d) *Hyalomma anatolicum anatolicum*
19. Buparvaquone is the drug of choice for  
a) Ehrlichiosis    b) Babesiosis    c) Theileriosis    d) Toxoplasmosis

20. 'PIRODOG' is a vaccine available and used for  
a) Ehrlichiosis in dogs                      b) Babesiosis in dogs  
c) *Sarcystis cruzi* in dogs                  d) Toxoplasmosis in dogs
21. Blood protozoan parasite transmitted through ingestion of ticks orally by dogs  
a) *Babesia canis*   b) *Eperythrozoon canis*   c) *Hepatozoon canis*   d) *Sarcocystis bovicanis*
22. Wet film examination of blood helps in diagnosis of  
a) *Trypanosoma evansi*                      b) Microfilaria in blood  
c) Abnormal shaped RBCs in blood        d) Both A and B
23. Transovarian transmission occurs in case of  
a) *Babesiabigemina* infection by *Boophilus* ticks  
b) *Theileriaannulata* infection by *Hyalomma* ticks  
c) *Anaplasma marginale* infection by *Haemaphysalis* ticks  
d) None of the above
24. Zoonotic protozoan parasite transmitted from cats to pregnant woman is  
a) *Trypanosoma evansi*                      b) *Trichomonas vaginalis*  
c) *Toxoplasma gondii*                        d) *Isospora felis*
25. *Theileria annulata* in cattle is transmitted by tick  
a) *Hyalomma anatolicum anatolicum*        b) *Boophilus (Rhipicephalus) microplus*  
c) *Argas persicus*                              d) *Ornithodoros savignyi*
26. First identified protozoan parasite by Anton von Leeuwenhoeck is  
a) *Trypanosoma evansi*                      b) *Eimeria stiedae*  
c) *Neospora caninum*                        d) *Trypanosoma lewici*
27. NNN medium used for *in vitro* cultivation of  
a) *Leishmania donovani*                      b) *Trypanosomacruzi*  
c) *Trypanosoma theileri*                      d) All the above
28. Intracellular, extracytoplasmic protozoan parasite causing villus atrophy  
a) *Toxoplasma gondii*                        b) *Cryptosporidiumparvum*  
c) *Leishmania donovani*                      d) *Giardia lamblia*
29. Rakshavac-T used as vaccine in cattle for  
a) *Babesiabigemina*   b) *Theileriaannulata*   c) *Anaplasma marginale*   d) All the above
30. Equine trypanosome species transmitted by coitus is  
a) *Trypanosoma evansi*                      b) *Trypanosoma equiperdum*  
c) *Trypanosoma equinum*                      d) All the above



31. *Haemoproteus coloumbae* in pigeons is transmitted by  
a) *Dermanyssus gallinae*                      b) *Stomoxys calcitrans*  
c) *Pseudolynchia canariensis*              d) *Cnemidocoptes mutans*
32. Caecal coccidiosis in poultry is caused by  
a) *Eimeria brunetti*                              b) *Eimeria necatrix*  
c) *Eimeria acervulina*                          d) *Eimeria tenella*
33. East coast fever in cattle is caused by  
a) *Trypanosoma evansi*                          b) *Theileria annulata*  
c) *Theileria parva*                                  d) *Babesia bovis*
34. Transmission of *Babesia bigemina* in cattle through arthropod *Boophilus annulatus* tick was first identified by  
a) Anton von Leeuwenhock                      b) Smith and Kilbourne  
c) Donovan    d) J.P.Dubey
35. Which is a Romanowsky's stain among these ?  
a) Leishman's stain                                  b) Wright's stain  
c) Giemsa's stain                                      d) All the above
36. Which is CORRECT statement with respect to *Eimeria* sp.?  
a) Oocyst contains 4 sporocysts each with 2 sporozoites  
b) Oocyst contains 2 sporocysts each with 4 sporozoites  
c) Oocyst contains 2 sporocysts each with 2 sporozoites  
d) Oocyst contains 4 sporozoites with no sporocysts
37. 'Dalmeny disease' in cattle is associated with  
a) *Eimeria zuernii*                                  b) *Eimeria bareillyi*  
c) *Sarcocystis bovicanis*                          d) *Sarcocystis bovi hominis*
38. *Anaplasma marginale* in cattle is transmitted through  
a) Mechanical transmission by biting vectors      b) Blood transfusion  
c) Needle transmission                                  d) All the above
39. Morula stage of *Ehrlichia canis* is seen in  
a) RBC      b) Small lymphocyte      c) Eosinophil      d) Monocyte
40. 'Sabin-Feldman dye test' is used for diagnosis of  
a) *Entamoeba histolytica*                          b) *Toxoplasma gondii*  
c) *Giardia lamblia*                                      d) *Plasmodium falciparum*
41. TICKGARD vaccine is prepared by using  
a) Chitin of *Boophilus microplus*  
b) BM86 antigen of *Boophilus microplus*  
c) Chitin of *Rhipicephalus sanguineus*

- d) BM86 antigen of *Haemaphysalis intermedia*
42. 'Gall sickness' is associated with disease caused by  
a) *Anaplasma marginale* in cattle      b) *Babesia bovis* in cattle  
c) *Eimeria stiedae* in rabbit      d) *Theileria parva* in cattle
43. 'Koch blue bodies' are  
a) Piroplasms of *Theileria annulata* in RBC  
b) Schizonts of *Theileria annulata* in RBC  
c) Piroplasms of *Theileria annulata* in lymphocyte  
d) Schizonts of *Theileria annulata* in lymphocyte
44. Diminazine aceturate (Berenil) is used in the treatment of  
a) Babesiosis      b) Theileriosis  
c) Trypanosomosis      d) All the above
45. 'Tropical canine pancytopenia' is associated with  
a) *Babesia gibsoni*      b) *Babesia canis*  
c) *Ehrlichia canis*      d) *Ehrlichia bovis*
46. Solution 2.5% potassium dichromate is used for  
a) Staining of intestinal *Giardia*  
b) *in vitro* sporulation of *Eimeria* oocysts  
c) *in vitro* cultivation of *Entamoeba*  
d) Clearing agent for ticks
47. Modified ZN staining is used for staining of  
a) oocysts of *Eimeria*      b) oocysts of *Cryptosporidium*  
c) oocysts of *Isospora*      d) oocysts of *Toxoplasma gondii*
48. Winter coccidiosis in calves is mainly caused by  
a) *Eimeria canadensis*      b) *Eimeria bareillyi*  
c) *Eimeria zuernii*      d) *Eimeria necatrix*
49. *Dipylidium caninum* in dogs is transmitted by  
a) *Ctenocephalides canis*      b) *Trichodectes canis*  
c) *Ctenocephalides felis*      d) All the above
50. *Melophagus ovinus* fly is commonly known as  
a) Bazaar fly      b) Sheep cleg      c) Nasal bot      d) Sheep ked

**Answers (Vet.Entomology and Vet. Protozoology):**

- |       |       |       |
|-------|-------|-------|
| 1. B  | 21. C | 41. B |
| 2. B  | 22. D | 42. A |
| 3. C  | 23. A | 43. D |
| 4. A  | 24. C | 44. D |
| 5. A  | 25. A | 45. C |
| 6. C  | 26. B | 46. B |
| 7. C  | 27. D | 47. B |
| 8. A  | 28. B | 48. C |
| 9. A  | 29. B | 49. D |
| 10. A | 30. B | 50. D |
| 11. D | 31. C |       |
| 12. C | 32. D |       |
| 13. C | 33. C |       |
| 14. B | 34. B |       |
| 15. B | 35. D |       |
| 16. D | 36. A |       |
| 17. B | 37. C |       |
| 18. A | 38. D |       |
| 19. C | 39. D |       |
| 20. B | 40. B |       |

## VETERINARY PATHOLOGY

- 1 Exudate is characterised by
  - A. Alkaline Ph
  - B. Protein content <3%
  - C. Clear watery fluid
  - D. High leucocyte count
- 2 Vesicles in foot and mouth disease are an example of
  - A. Hydropic degeneration
  - B. Mucinous degeneration
  - C. Mucoïd degeneration
  - D. Parenchymatous degeneration
- 3 Deposition of sand particles in lung is called
  - A. Anthracosis
  - B. Chalicosis
  - C. Silicosis
  - D. Siderosis
- 4 Dystrophic calcification is characterized by
  - A. Hypocalcaemia
  - B. Normal calcium level in blood
  - C. Urate deposition
  - D. Excessive growth of bones
- 5 Obstructive jaundice occurs in
  - A. Anaplasmosis
  - B. Leptospirosis
  - C. Gall stones
  - D. Copper toxicity
- 6 Plasma cells are derived from
  - A. Plasma
  - B. Lymphocytes
  - C. Bone marrow
  - D. Macrophages
- 7 Cart wheel appearance of nucleus is a characteristic feature of
  - A . Plasma cell
  - B . Lymphocytes
  - C . Neutrophil
  - D . Macrophages
- 8 Thrush breast heart is seen in
  - A . Amyloid degeneration
  - B . Glycogen infiltration
  - C . Hyropic degeneration
  - D . Fatty infiltration
- 9 “Basophilic stippling” of erythrocytes is encountered in
  - A . Anaplasmosis
  - B .Lead poisoning
  - C . Haemonchosis
  - D . All of the above
- 10 “White spotted kidney” is the pathological manifestation of
  - A . Diffuse interstitial nephritis
  - B .Focal interstitial nephritis
  - C . Pyelonephritis
  - D .Pyaemic nephritis
- 11 “Large white kidney” is the characteristic macroscopic lesion seen in
  - A . Subacute glomerulonephritis
  - B .Chronic glomerulonephritis
  - C . Acute glomerulonephritis
  - D .None
- 12 “Broken wind or heaves” is characteristic of
  - A . Acute alveolar emphysema
  - B . Chronic alveolar emphysema
  - C . Interstitial emphysema
  - D . None of the above
- 13 “Bread and butter” appearance of heart is
  - A . Fibrinous pericarditis
  - B .Fibrinous peritonitis
  - C . Both A and B
  - D . None of the above
- 14 Fish flesh appearance of muscle is seen in
  - A . Myonecrosis
  - B . Fat infiltration

- C . Stiff lamb disease  
 15 Tuberculosis is the best example for  
 A . Coagulative necrosis  
 C . Liquefaction necrosis  
 16 Macrophages of brain are called  
 A . Histiocytes  
 C . Microglia  
 17 Diffuse spreading suppurative inflammation of connective tissue is called  
 A . Boil  
 C . Pustule  
 18 “Onion skin” appearance of the blood vessel wall is seen in  
 A . Hyperplastic arteriolosclerosis  
 C . Aneurysm  
 19 Inflammation of gray matter in brain is known as  
 A .Poliomyelitis  
 C .Poliomalacia  
 20 The test used to diagnose the presence of protein in the CSF  
 A . Pandy’s test  
 D . Benedict’s test  
 21 The test used to find out the presence of protein in the body fluid is  
 A . Heller’s test  
 C .Rothera’s test  
 22 The test used to find out the presence of protein in the urine is  
 A .Heller’s test  
 C .Rothera’s test  
 23 Presence of metachromatic granules are the charateristic features of  
 A . Mast cell tumour  
 C . Melanoma  
 24 “Fingerprint” appearance of tumour is seen in  
 A . Squamous cell carcinoma  
 C . Haemangiopericytoma  
 25 Cytoplasmic vacuolations are the charateristic feature of  
 A . Mast cell tumour  
 C . Melanoma  
 26 Pearls or cell nest is charateristic features of  
 A .Squamous cell carcinoma  
 C .Basal cell carcinoma  
 27 “Rodent ulcer or Jacob’s ulcer or hair matrix carcinoma” is otherwise called  
 A .Mast cell tumour  
 C .Squamous cell carcinoma  
 28 Mischief by killing or maiming is punished under  
 A . IPC 428 & 429  
 C . IPC 415  
 D . Glycogen infiltration  
 B . Caseation necrosis  
 D . Fat necrosis  
 B . Astrocytes  
 D . Schwann cells  
 B . Abscess  
 D . Phlegmon/cellulitis  
 B . Hyaline arteriolosclerosis  
 D .Atherosclerosis  
 B .Polioencephalitis  
 D . Leucomalacia  
 B .Nonne-apelt test  
 D . Both A & B  
 B .Hay’s test  
 D .Rivaltas test  
 B .Hay’s test  
 D .Rivaltas test  
 B . TVT  
 D . All of the above  
 B . TVT  
 D .Basal cell carcinoma  
 B . TVT  
 D . None of the above  
 B .TVT  
 D .Haemangiopericytoma  
 B . Haemangiopericytoma  
 D .Basal cell carcinoma  
 B . IPC 420  
 D . IPC 430

- 29 Sexual assault or Bestiality unnatural offence is punished under  
 A . IPC 326 B . IPC 377  
 C . IPC 415 D . IPC 430
- 30 Prevention of cruelty to animals act was found in  
 A . 1959 B . 1960  
 C . 1961 D . 1962
- 31 The common preservative used for chemical examination of tissue samples  
 A . Saturated salt solution B . 10% Formalin  
 C .Mercuric chloride D . None of the above
- 32 Universal fixative for histopathology examination is  
 A .40 % Formalin B . Saturated salt solution  
 C . 10% Formalin D .All of the above
- 33 Postmortem discolouration or staining of the carcass is  
 A .Algor mortis B .Livor mortis  
 C .Rigor mortis D .None of the above
- 34 The wound caused by sharp cutting weapon is  
 A .Incised wound B .Lacerated wound  
 C .Punctured wound D .Gunshot wound
- 35 The wound caused by pointed object is  
 A .Incised wound B .Lacerated wound  
 C .Punctured wound D .Gunshot wound
- 36 Bishoping is punished under the section  
 A .IPC 428 & 429 B . IPC 420  
 C . IPC 415 D . IPC 430
- 37 Malicious poisoning and doping is punished under  
 A .IPC 428 & 429 B . IPC 420  
 C . IPC 415 D . IPC 430
- 38 Sale of noxious food or drink is punished under  
 A .IPC 273 B . IPC 271  
 C . IPC 274 D . IPC 275
- 39 False entry or false evidence is punished under  
 A .IPC 192 & 193 B . IPC 204  
 C . IPC 415 D . IPC 420
- 40 Samples required for Nitrate/Nitrite poisoning is  
 A .Liver, kidney and brain B . Stomach contents, liver and brain  
 C .Serum in ice, Feed & water D . None of the above
- 41 The quantity of liver, intestinal & stomach contents required for chemical examination  
 A .100 g B .300 g  
 C .10 g D . 500-1000 g
- 42 Arborization is the feature of  
 A .Burn injury B .Electrocution/lightening stroke  
 C .Drowning D .Doping

- 43 Heart failure cells in lungs and “Nut meg pattern” of liver are found in  
 A . Chronic general passive hyperemia                      B . Acute general passive hyperemia  
 C . Local passive hyperemia                                      D . All of the above
- 44 Focal infiltration of amyloid material in spleen is called  
 A .Sago spleen    B .Bacon spleen  
 C .Both A &B    D . None of the above
- 45 Generalised subcutaneous edema is called  
 A .Anaplasia    B .Anasarca  
 C .Agenesis     D .Apoplexy
- 46 Haemorrhage in brain is called  
 A .Anaplasia    B .Anasarca  
 C .Agenesis     D .Apoplexy
- 47 Gas gangrene occur in  
 A .Extremities    B .Clostridial diseases  
 C .Lungs    D .Intestine
- 48 The inflammation of spermatic cord is called  
 A .Orchitis     B .Seminal vesiculitis  
 D .Balanitis    D .Funiculitis
- 49 The inflammation of crop is called  
 A .Ingluvitis     B .Proventriculitis  
 C .Ventriculitis    D .None of the above
- 50 The inflammation of eyelids is called  
 A .Trichiasis     B .Keratitis  
 C .Entropion     D .Blepharitis
- 51 “Cells of tripierepitheliolisation” of lung is the feature of  
 A .Interstitial pneumonia    B .Bronchopneumonia  
 C .Interstitial emphysema    D .Alveolar emphysema
- 52 The wear and tear pigment is called  
 A .Lipochrome    B .Melanin  
 C .Hemosiderin    D .Bilirubin
- 53 The alteration in the size, shape and orientation of cells are the features of  
 A . Hypertrophy    B .Metaplasia  
 C .Hyperplasia    D .Dysplasia
- 54 Giant cells are arise from  
 A .Macrophage    B .Neutrophil  
 C .Lymphocyte    C .Plasma cells
- 55 Air embolism causes  
 A . Caisson disease    B .Brisket disease  
 C .Bottle jaw     D .All the above
- 56 Father of modern/cellular pathology is  
 A .John hunter    B .Rudolf virchow  
 C .Koch    D .Ellie metchnikof

- 57 The routine stain used for histopathological examination is  
 A .Leishman stain B .Giemsa stain  
 C .Lactophenol cotton stain D .Haematoxylin & Eosin stain
- 58 The special stain used for demonstration of fat in tissues is/are  
 A .Osmic acid B .Sudan red  
 C .Oil red O D .All of the above
- 59 The special stain used for demonstration of iron is  
 A .Von kossa stain B .Koster stain  
 C .Pearl's Prussian blue stain D . Sellers stain
- 60 The special stain used for demonstration of amyloid is  
 A .Periodic acid Schiff B .Congo red  
 C .Pearl's Prussian blue stain D . Alcian blue stain
- 61 Bull's eye appearance of erythrocyte is  
 A .Drepanocyte B .Target cell/codocyte  
 C .Cabot ring D .Lead poisoning
- 62 The anticoagulant used for preservation of glucose is  
 A .Sodium fluoride B .EDTA  
 C .Heparin D .All of the above
- 63 The diluting fluid used for platelet estimation is  
 A .Haeyem's fluid B . Rees Ecker's fluid  
 C .Thomas fluid D . Nambiar's fluid
- 64 Miller's disease/Big head disease/Bran disease in horses is due to  
 A . Phosphorous deficiency B . Magnesium deficiency  
 C . Phosphorous excess D . Magnesium excess
- 65 Goose stepping gait in pig is due to the deficiency of  
 A . Folic acid B . Magnesium  
 C . Pyridoxine D . Pantothenic acid
- 66 Proventriculus and gizzard junction haemorrhage is a typical lesion in  
 A. IBD B. Ranikhet disease  
 C. Mycotoxins D. Avian Influenza
- 67 Ecchymoses in shank is a characteristic lesion of  
 A. Chicken infectious anemia B. IBD  
 C. Ranikhet disease D. Avian Influenza
- 68 Which one of the following is incorrect about lymphoid leukosis  
 A. Caused by RNA virus B. It is neoplastic in origin  
 C. Ovaries are rarely affected D. Nerves are frequently involved
- 69 Common form of cannibalism which results in anaemia is  
 A. Vent pecking B. Toe pecking  
 C. Pica D. Feather pecking



- 70 The characteristic finding in fowls affected with spirochaetosis is  
A. Severe splenomegaly  
B. Hepatomegaly  
C. Nephritis  
D. Cardiomegaly
- 71 The organ frequently involved in Hjarre's disease is  
A. Lung  
B. Spleen  
C. Kidney  
D. Intestine
- 72 Gizzard erosion is due to  
A. Vitamin A deficiency  
B. Vitamin B<sub>12</sub> deficiency  
C. Zinc deficiency  
D. Vitamin C deficiency
- 73 Facial oedema and foul smelling discharges are seen in  
A. CRD  
B. Infectious coryza  
C. Infectious synovitis  
D. None
- 74 Zoonotic disease in chicken is  
A. Avian influenza  
B. Salmonellosis  
C. Chlamydiasis  
D. All of the above
- 75 "Stargazing" is associated with deficiency of  
A. Vitamin A  
B. Vitamin B1  
C. Vitamin B2  
D. Folic acid
- 76 The inclusions seen in hepatocytes of birds with IBH are  
A. Intracytoplasmic  
B. Intranuclear  
C. Both A and B  
D. None of the above
- 77 Blue comb disease  
A. Favus  
B. Avian monocytosis  
C. Chicken infectious anemia  
D. Avian influenza
- 78 Chicken infectious anemia is caused by  
A. Birnavirus  
B. Adenovirus  
C. Coronavirus  
D. Circovirus
- 79 The site of choice for collection of material for diagnosis of infectious coryza is  
A. Air sacs  
B. Trachea  
C. Lungs  
D. Infraorbital sinus
- 80 Crazy chick disease is due to deficiency of  
A. Thiamine  
B. Vitamin E  
C. Riboflavin  
D. Vitamin A
- 81 The susceptible age of chicken for IBD is  
A. Less than a week  
B. 1- 2 weeks  
C. 2 -4 weeks  
D. Older birds
- 82 The replication of infectious bronchitis virus occurs in the tissues of  
A. Respiratory tract  
B. Oviduct  
C. Kidney  
D. All
- 83 Femoral head necrosis is associated with the deficiency of  
A. Molybdenum  
B. Selenium  
C. Zinc  
D. Copper

- 84 Round heart disease is associated with the deficiency of  
 A. Biotin  
 B. Choline  
 C. Selenium  
 D. Magnesium
- 85 Bumble foot is caused by  
 A. Staphylococci  
 B. Corynebacterium  
 C. *E.coli*  
 D. None of the above
- 86 The acute toxemic diseases of sheep that shows hyperglycemia and glycosuria are observed during  
 A. Lock jaw  
 B. Pulpy kidney disease/ Over eating disease  
 C. PPR  
 D. Both B and C
- 87 Perosis/ slipped tendon is observed in the deficiency of \_\_\_\_\_ in chicken  
 A. Sulphur  
 B. Manganese  
 C. Iron  
 D. Copper
- 88 Copper deficiency causes  
 A. Enzootic ataxia  
 B. Azoturia  
 C. Post parturient hemoglobinuria  
 D. None of the above
- 89 Canine filariasis is caused by  
 A. *Spirocerca lupi*  
 B. *Dirofilaria immitis*  
 C. *Setaria digitata*  
 D. *Eimeria spp.*
- 90 The species that is considered as the amplifier host for FMD infection is  
 A. Cattle  
 B. Sheep  
 C. Goat  
 D. Pig
- 91 Vitamin E deficiency in calves causes  
 A. Scurvy  
 B. White muscle disease  
 C. Haemorrhagic diathesis  
 D. Chastek paralysis
- 92 In Rabies, rhabdovirus is -----but has an affinity toward ----- gland  
 A. Neurotropic and temporal  
 B. Epitheliotropic and pituitary  
 C. Neurotropic and salivary  
 D. Neurotropic and pineal
- 93 In scrapie, ----- is the notable microscopic lesion  
 A. Neuronal necrosis  
 B. Perivascular cuffing  
 C. Vacuolation of neurons  
 D. None of the above
- 94 Brooder pneumonia in chicks is caused by  
 A. *Trichophyton schoenleinii*  
 B. *Microsporium gallinae*  
 C. *Aspergillus fumigatus*  
 D. *Candida spp.*
- 95 Para-pox virus causes  
 A. Cow pox  
 B. Horse pox  
 C. Contagious pustular dermatitis  
 D. Vesicular stomatitis
- 96 Negri bodies are more commonly found in -----portion of the brain in canine and -----  
 -portion of the brain in cattle  
 A. Hippocampus and cerebellum  
 B. Cerebellum and Hippocampus  
 C. Medulla and pons  
 D. Pons and Medulla
- 97 Sheep are found dead with oozing of dark coloured, tarry blood from the natural orifices in  
 A. Anthrax  
 B. Blue tongue  
 C. sheep pox  
 D. Anapalsmosis

- 98 Morbillivirus is not antigenically related to  
 A. FMD in cattle  
 B. Canine distemper  
 C. PPR of sheep and goats  
 D. Measles of humans
- 99 Old dog encephalitis is otherwise called  
 A. Rabies  
 B. Canine Distemper  
 C. Infectious Canine Hepatitis  
 D. Canine Parvo viral enteritis
- 100 Icterus, anaemia, hemoglobunuria, abortion, petechiae on mucus membrane and demonstration of organism in section by Levaditi's stain are diagnostic points for  
 A. Anaplasmosis  
 B. IBRT  
 C. Listeriosis  
 D. Leptospirosis
- 101 Equine plague is otherwise called  
 A. African horse sickness  
 B. Equine encephalomyelitis  
 C. Swamp fever  
 D. Strangles
- 102 "Onion skin" like appearance cross section of caseated mass in lymph node is noticed in -----  
 A. Caseous lymphadenitis of sheep  
 B. Ulcerative lymphangitis  
 C. A only correct  
 D. A and B correct
- 103 Anaemia in Equine infectious anaemia is due to  
 A. Direct lysis of RBC  
 B. Erythrophagocytosis  
 C. Haemoglobin – haptoglobin complex removal  
 D. All the above
- 104 Feline panleukopenia virus replicates in  
 A. Labile cells  
 B. Stable cells  
 C. Permanent cells  
 D. None of the above
- 105 Ascaris can cause  
 A. Milk spot liver  
 B. Pipe stem liver  
 C. Hepatocellular carcinoma  
 D. Bile duct hyperplasia
- 106 The animal is least susceptible to tetanus  
 A. Cattle  
 B. Chicken  
 C. Horse  
 D. Dog
- 107 *Staphylococcus aureus* in pigs causes  
 A. Greasy pig disease  
 B. Glasser's disease  
 C. Gut edema disease  
 D. Aujeszky's disease
- 108 Ancylostomiasis in aberrant hosts causes dermatitis called as  
 A. Creeping eruptions  
 B. Visceral larva migrans  
 C. Chonchre  
 D. Lishman Donovan bodies
- 109 Visceral larva migrans is characterized by  
 A. Eosinophilic granulomas  
 B. Fibrinous pneumonia  
 C. Leishmonoid bodies  
 D. Leishman- Donovan bodies
- 110 Presence of adult amphistomes in forestomach is  
 A. Highly pathogenic  
 B. Moderately pathogenic  
 C. Non-pathogenic  
 D. Mildly pathogenic
- 111 Pseudorabies is also known as  
 A. Aujeszky's disease  
 B. Mad itch  
 C. Infectious bulbar paralysis  
 D. All of the above

- 112 The characteristic lesion observed during Maedi infection is  
A. Interstitial Pneumonia  
B. Demyelination  
C. Haemorrhagic enteritis  
D. None of the above
- 113 Glanders is identified by  
A. Strauss test  
B. Antony's test  
C. Casoni's test  
D. Coggin's test
- 114 "Rectal pinch" biopsy is helpful for the diagnosis of  
A. Rinderpest  
B. Malignant catarrh fever  
C. Johne's disease  
D. Tuberculosis
- 115 "Diamond" shaped cutaneous lesions are the characteristic feature of  
A. Swine influenza  
B. Swine erysipelas  
C. Swine fever  
D. Porcine enzootic pneumonia
- 116 The other name for Brucellosis is/ are  
A. Mediterranean fever  
B. Malta fever  
C. Bang's disease  
D. All
- 117 The symptoms manifested in the bovine babesiosis is/ are  
A. Haemoglobinuria  
B. Icterus  
C. Haemolysis  
D. All
- 118 Weil's disease is otherwise called  
A. Leptospirosis  
B. Listeriosis  
C. Pasteurellosis  
D. Brucellosis
- 119 Punched out ulcers in the abomasum is characteristic lesion of  
A. Trypanosomiasis  
B. Babesiosis  
C. Theileriosis  
D. Toxoplasmosis
- 120 Tigroid heart is the characteristic lesion of  
A. Vesicular stomatitis  
B. Foot and Mouth disease  
C. Vesicular exanthema  
D. Rinderpest

**Keys:**

1	D	21	D	41	D	61	B	81	B	101	A
2	A	22	A	42	B	62	A	82	D	102	A
3	C	23	A	43	A	63	B	83	A	103	D
4	B	24	C	44	A	64	C	84	C	104	A
5	C	25	B	45	B	65	D	85	A	105	A
6	B	26	A	46	D	66	A	86	B	106	A
7	A	27	D	47	B	67	D	87	B	107	A
8	D	28	A	48	D	68	D	88	A	108	D
9	D	29	B	49	A	69	A	89	B	109	A
10	B	30	B	50	D	70	A	90	D	110	C
11	A	31	A	51	A	71	D	91	B	111	D
12	B	32	C	52	A	72	B	92	C	112	A
13	A	33	B	53	D	73	B	93	C	113	A
14	C	34	A	54	A	74	D	94	C	114	C
15	B	35	C	55	A	75	B	95	C	115	B
16	C	36	B	56	B	76	B	96	A	116	D
17	D	37	A	57	D	77	B	97	A	117	D
18	A	38	A	58	D	78	D	98	A	118	A
19	B	39	A	59	C	79	D	99	B	119	C
20	D	40	C	60	B	80	B	100	D	120	B

**VETERINARY PHARMACOLOGY**

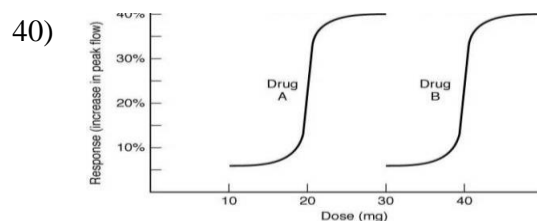
- 1) Morphine is obtained from
  - a) *Papaver somniferum*
  - b) *Atropa belladonna*
  - c) *Areca catechu*
  - d) *Hyoscyamus niger*
- 2) The renal elimination of the drug is favoured by
  - a) Protein bound
  - b) High lipid solubility
  - c) Non-ionized form
  - d) High water solubility
- 3) If the total amount of a drug present in the body is 2000 mg and its plasma concentration is 25 µg/ml, its volume of distribution is
  - a) 100 L
  - b) 80 L
  - c) 60 L
  - d) 40 L
- 4) Drug induced teratogenicity is
  - a) Drug causing cancer
  - b) Drug causing genetic material abnormalities
  - c) Drug causing foetal abnormalities
  - d) Veterinarians induced diseases
- 5) Vitamin with antioxidant properties include
  - a) Vitamin D
  - b) Vitamin A
  - c) Vitamin K
  - d) Vitamin E
- 6) Which one of the following is an antiemetic
  - a) Apomorphine
  - b) Copper sulphate
  - c) Sodium chloride
  - d) Metoclopramide
- 7) Calcium homeostasis in the body is regulated by, except
  - a) Calcitonin
  - b) Insulin
  - c) Vitamin D
  - d) Parathyroid hormone
- 8) Which of the following would be ineffective in producing closure of the esophageal groove in calf?
  - a) Water
  - b) Milk
  - c) Sodium bicarbonate
  - d) Copper sulphate
- 9) Drug-receptor occupation theory was proposed by,
  - a) E.J.Ariens
  - b) A.J.Clark
  - c) Patron
  - d) R.P.Stephenson
- 10) Who is regarded as the father of Indian Pharmacology?
  - a) Dhanwantri
  - b) Hippocrates
  - c) Galen
  - d) R.N.Chopra

- 11) Which class of antiarrhythmic agents act by blocking calcium channel  
 a) Class I                                      b) Class II  
 c) Class III                                      d) Class IV
- 12) Isotonic dextrose solution contains  
 a) 2.5% dextrose                              b) 5% dextrose  
 c) 7.5% dextrose                              d) 10 % dextrose
- 13) The following drugs are antimotility drugs, except;  
 a) Codeine                                      b) Bisacodyl  
 c) Diphenoxylate                              d) Loperamide
- 14) One of the following is the therapeutic response with digitalis  
 a) Increased heart rate                              b) Increased end diastolic pressure  
 c) Increased blood volume                              d) Increased force of myocardial contraction
- 15) The following are anterior pituitary hormones, except;  
 a) Prolactin                                      b) Oxytocin  
 c) Follicle stimulating hormone                              d) Thyroid stimulating hormone
- 16) The following characteristic of a drug tends to reduce its volume of distribution  
 a) High lipid solubility                              b) Low ionisation of drug  
 c) High plasma protein binding                              d) High tissue binding
- 17) Secretory product of plant source of drug is  
 a) Gum                                      b) Alkaloid  
 c) Saponin                                      d) Glycosides
- 18) Active transport of a substance across biological membranes has the following characteristics, except;  
 a) It is specific                                      b) It is pH dependent  
 c) It is saturable                                      d) It requires energy
- 19) New drugs are discovered by the following procedures, except;  
 a) Molecular designing                              b) Serendipity  
 c) Recombinant DNA biotechnology                              d) Intolerance
- 20) 500 mg of drug A is administered through the intravenous route. The same drug is also administered orally and only 250 mg is absorbed unchanged. What is the bioavailability of drug A?  
 a) 50%                                      b) 200%  
 c) 50 mg                                      d) 200 mg

- 21) Astringents
- a) Loosen the keratin layer
  - b) Reduce the inflammation
  - c) Induce hyperemia
  - d) Precipitate proteins
- 22) Which of the following statement is correct regarding the inverse agonist
- a) It has both affinity and maximal intrinsic activity (IA=1)
  - b) It has affinity but no intrinsic activity (IA=0)
  - c) It has affinity and submaximal intrinsic activity (IA= 0 to 1)
  - d) It has affinity but intrinsic activity in the negative side (IA= -1)
- 23) H1 antihistaminic antiemetic drugs possess the following characters, except;
- a) Anticholinergic
  - b) Antiinflammatory
  - c) Antidopaminergic
  - d) Sedation
- 24) Which of the following is not an anticoagulant
- a) Vitamin K
  - b) Heparin
  - c) Sodium citrate
  - d) Warfarin sodium
- 25) Alkalinization of urine hastens the excretion of
- a) Weakly basic drugs
  - b) Weakly acidic drugs
  - c) Strong electrolytes
  - d) Nonpolar drugs
- 26) Concomitant administration of furosemide and aminoglycoside antibiotics may cause,
- a) Hepatotoxicity
  - b) Cardiotoxicity
  - c) Osteoporosis
  - d) Ototoxicity
- 27) Drugs that act in the CNS to raise the threshold of cough centre are called
- a) Antitussives
  - b) Demulcents
  - c) Expectorants
  - d) Brochodilators
- 28) Official name of a drug is
- a) One given in Pharmacopoeia
  - b) Its chemical name
  - c) Its proprietary name
  - d) Its non-proprietary name
- 29) Nitrogenous products of plant origin is
- a) Alkaloid
  - b) Glycosides
  - c) Tannins
  - d) Saponins
- 30) The combined effect of two drugs is less than that of individual effect is
- a) Summation
  - b) Potentiation
  - c) Antagonism
  - d) Addition
- 31) A nonvolatile, highly lipid soluble drug is metabolized at a rate of 15% per hour. On intravenous injection it produces general anaesthesia for only 10 min. Which process is responsible for quick termination of its action



- a) Metabolism in liver      b) Plasma protein binding  
 c) Excretion by kidney      d) Redistribution
- 32) Which of the following cytochrome P450 isoenzymes is involved in the metabolism of largest number of drugs
- a) CYP 3A4                      b) CYP 2C9  
 c) CYP 2E1                      d) CYP 1A2
- 33) If a drug is excreted in urine at the rate of 10 mg/hr at a steady-state plasma concentration of 5 mg/L, then its renal clearance is
- a) 0.5 L/hr                      b) 2.0 L/hr  
 c) 5.0 L/hr                      d) 20 L/hr
- 34) Select the receptor that is located intracellularly
- a) Opioid  $\mu$  receptor      b) Steroid receptor  
 c) Prostaglandin receptor      d) Angiotensin receptor
- 35) Down regulation of receptors can occur as a consequence of
- a) Continuous use of agonists      b) Continuous use of antagonists  
 c) Chronic use of CNS depressants      d) Denervation
- 36) Somatostatin inhibits the release of
- a) Growth hormone      b) Insulin  
 c) Thyrotropin      d) Oestrogen
- 37) Simple bloat can be relieved by administration of drug
- a) Liquid paraffin      b) Pectin  
 c) Sucralfate      d) Kaolin
- 38) An ideal fluid therapy for treating diarrhoea is
- a) Normal saline      b) Ringer lactate  
 c) 5% dextrose      d) 25% dextrose
- 39) An orphan drug is
- a) A very cheap drug      b) A drug which has no therapeutic use  
 c) A drug needed for treatment or prevention of rare disease      d) A drug which acts on orphanin receptors



- a) Drug A is less potent and less efficacious than drug B      b) Drug A more potent but equally efficacious to drug B
- c) Drug B more potent but equally efficacious to drug A      d) Drug B less potent and less efficacious than drug A
41. The following clinical conditions can be treated with prostaglandin F<sub>2</sub> alpha, EXCEPT;
- a) Luteolysis      b) Pyometra
- c) Inflammation      d) Mummified foetus

42.

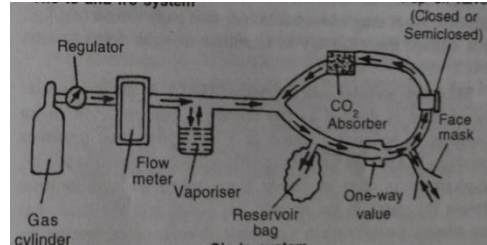
<i>Anaesthetic</i>	<i>Oil:Gas PC</i>	<i>Blood:gas PC</i>	<i>MAC(%)</i>
<i>Ether</i>	65	12.1	1.9
<i>Halothane</i>	224	2.3	0.75
<i>Desflurane</i>	19	0.42	6
<i>N2O</i>	1.4	0.47	105

Based on the above table, the following are true, EXCEPT;

- a) Halothane is potent anaesthetic and have intermediate induction      b) N<sub>2</sub>O is very less potent anaesthetic and have very fast induction
- c) Desflurane is less potent anaesthetic and have very fast induction      d) Ether is potent anaesthetic and have fast induction
43. Renin-Angiotensin system is inhibited by the following, EXCEPT;
- a) Aldosterone antagonists      b) Direct renin blockers
- c) Sympathomimetic drugs      d) Angiotensin converting enzyme inhibitors
44. The adrenoceptor located on the prejunctional nerve cell is
- a) β 1 receptor      b) α1 receptor
- c) β2 receptor      d) α2 receptor
45. Neurotransmitters are terminated by the following processes, EXCEPT;
- a) Metabolic degradation      b) Co-transmission
- c) Re-uptake process      d) Diffusion
46. The duration of local anaesthetics are prolonged by
- a) Cocaine      b) Adrenaline
- c) Acetyl choline      d) Procaine
47. The followings are mediators of allergic reactions, EXCEPT;
- a) Histamine      b) Leukotrienes
- c) Angiotensin      d) Platelet activating factor
48. Which one of the following is natural opioid,
- a) Morphine      b) Pethidine
- c) Tramadol      d) Fentanyl



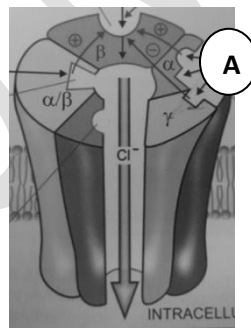
58.



The picture refers to which method of administration of inhalational anaesthetic agent

- a) Open drop method
  - b) Semiclosed system
  - c) Closed system
  - d) None of the above
59. Catecholamine includes all of the following, EXCEPT;
- a) Epinephrine
  - b) Ephedrine
  - c) Norepinephrine
  - d) Dopamine
60. Stage of surgical anaesthesia are
- a) Plane 1 and 2 of Stage II
  - b) Plane 3 and 4 of Stage II
  - c) Plane 1 and 2 of Stage III
  - d) Plane 3 and 4 of Stage III
61. The following are products of cyclooxygenase pathway, EXCEPT
- a) LTB4
  - b) PGF2 alpha
  - c) TXA2
  - d) PGE2
62. The following are the gastrointestinal prokinetic drugs, EXCEPT;
- a) Pheniramine
  - b) Cisapride
  - c) Renzapride
  - d) Metoclopramide
63. A dog is chasing cow. Cow tries to attack the dog. Name the autonomic nervous system involves in this incidence.
- a) Sympathetic nervous system
  - b) Parasympathetic nervous system
  - c) Musculo-skeletal system
  - d) All of the above

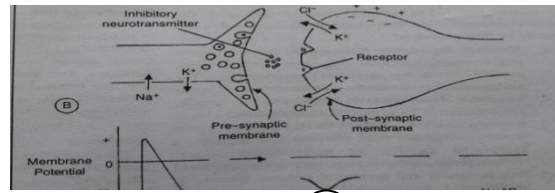
64.



In the diagram, A indicates

- a) Binding site for GABA
  - b) Binding site for benzodiazepine
  - c) Binding site for Barbiturate
  - d) Binding site for aspartate
65. The following are characteristics of injectable anaesthetics, EXCEPT;
- a) Slow induction
  - b) Do not require costly and sophisticated equipment
  - c) Slow recovery
  - d) Depth or level of anaesthesia is difficult to control

66.



A

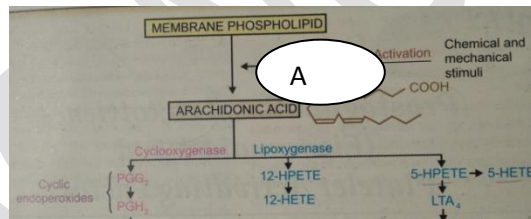
In the above diagram, A refers to,

- a) Excitatory Post Synaptic Potential (EPSP)
- b) Inhibitory Post Synaptic Potential (IPSP)
- c) Action Potential (AP)
- d) No potential

67. During the induction of anaesthesia, the flow direction of anaesthetic agent is

- a) Inspired air → Alveoli → Arterial blood → Brain
- b) Alveoli → Inspired air → Arterial blood → Brain
- c) Arterial blood → Inspired air → Alveoli → Brain
- d) Brain → Arterial blood → Inspired air → Alveoli

68.



In the diagram, A refers to,

- a) Cyclooxygenase
- b) Lipoxygenase
- c) Thrombane oxygenase
- d) Phospholipase A

69 Toxicity of aminoglycosides includes all of the following, except

- a) Neuromuscular blockade
- b) Anaemia
- c) Ototoxicity
- d) Nephrotoxicity

- 170 The following antibiotics are acting by inhibition of cell wall synthesis, except
- a) Penicillin
  - b) Cephalosporin
  - c) Macrolide
  - d) Bacitracin
- 71 Sulphonamides and trimethoprim are combined in the ratio of
- a) 5:1
  - b) 5:2
  - c) 5:3
  - d) 5:4
- 72 The anthelmintic activity of the following drug is attributed to its cholinomimetic activity
- a) Albendazole
  - b) Levamisole
  - c) Piperazine
  - d) Organophosphorus compounds
- 73 Natural penicillin is
- a) Amoxicillin
  - b) Penicillin G
  - c) Ticarcillin
  - d) Methicillin
- 74 The followings are macrolide antibiotics, except;
- a) Erythromycin
  - b) Vancomycin
  - c) Azithromycin
  - d) Tylosin
- 75 The major toxic effects of amphotericin B is
- a) Bone marrow suppression
  - b) GI disturbances
  - c) Renal toxicity
  - d) Liver toxicity
- 76) Which one of the following drugs is cell cycle phase specific?
- a) Actinomycin D
  - b) Cisplatin
  - c) Vincristine
  - d) Chlorambucil
- 77 6-mercaptopurine is
- a) Antimetabolite
  - b) Mitotic inhibitors
  - c) Topoisomerase inhibitors
  - d) Alkylating agent
- 78 Synthetic pyrethroid ectoparasicide is
- a) Amitraz
  - b) Dichlorvos

- c) Cypermethrin                      d) Ivermectin
- 79 The following drugs are effective against cestodes, except;
- a) Praziquintol                      b) Ivermectin
- c) Pyrantal pamoate                      d) Fenbendazole
- 80 Pyrethroids are highly sensitive to
- a) Cat                      b) Cattle
- c) Dog                      d) Horse

Key

1	A	11	D	21	D	31	D	41	C
2	D	12	B	22	D	32	A	42	D
3	B	13	d	23	B	33	A	43	C
4	C	14	D	24	D	34	B	44	D
5	D	15	B	25	B	35	B	45	B
6	D	16	C	26	D	36	A	46	B
7	B	17	A	27	A	37	A	47	C
8	A	18	B	28	A	38	B	48	A
9	B	19	D	29	C	39	C	49	B
10	d	20	A	30	D	40	b	50	A

51	D	61	A	71	A
52	A	62	A	72	D
53	B	63	A	73	B
54	B	64	B	74	B
55	A	65	A	75	C
56	B	66	B	76	A
57	C	67	A	77	a
58	C	68	d	78	C
59	B	69	B	79	B
60	c	70	C	80	a

## VETERINARY TOXICOLOGY

1. In ruminants blue-green coloured faeces is indicative of following poisoning
  - a) Lead
  - b) Mercury
  - c) Copper
  - d) Selenium
2. Compulsive hypermotility is associated with following poisoning
  - a) Lead
  - b) Mercury
  - c) Copper
  - d) Selenium
3. The plant which contains 34% of oxalates on dry matter basis is
  - a) *Hologetan glomeratus*
  - b) *Beta vulgaris*
  - c) *Oxalis pescaprae*
  - d) *Sorghum vulgare*
4. Bright blindness in sheep is caused by ingestion of the following plant
  - a) Alkali disease
  - b) Bracken fern poisoning
  - c) Oxalate poisoning
  - d) Arsenic poisoning
5. One of the following organochlorine is does not accumulate on adipose tissue
  - a) Lindane
  - b) Methoxychlor
  - c) DDT
  - d) Endosulfan
6. The following is the toxic ratio of Mo:Cu in the body
  - a) 6:1
  - b) >2:1
  - c) <2:1
  - d) 12:2
7. "Phossy jaw" condition in sheep is seen under the following toxicity
  - a) Mercury
  - b) Selenium
  - c) OPC
  - d) Phosphorus
8. In flurosis condition, density of the bone is
  - a) Increased
  - b) Decreased
  - c) No Change
  - d) None of the above
9. Type I pyrethroid toxicity are referred to as
  - a) T Syndrome
  - b) CS Syndrome
  - c) All the above
  - d) None of the above
10. The plant enzyme responsible for the relaease of HCN from cyanogenitic glycoside is
  - a) Thiaminase
  - b) Beta glycosidase
  - c) Alpha glycosidase
  - d) None of the above
11. The word "Hemolytic crisis" is associated with the following poisoning condition
  - a) As
  - b) Hg
  - c) Cu
  - d) Pb
12. The word "Gunmetal kidney " is associated with the following poisoning condition
  - a) As
  - b) Hg





24. Paraquat accumulates in
- Liver
  - Kidney
  - Pancreas
  - Lung
25. The characteristic smell of phosphine gas, which can be used for diagnosis of zinc phosphide toxicity is
- Garlic odour
  - Bitter almond odour
  - Fish like / Acetylene odour
  - None of the above
26. The word “Sui poisoning” associated with the following poisoning condition
- Abrus precatorius
  - Lantana camara
  - Ricinus cummunis
  - Ipomea carnea
27. The word “Steeep dose response curve” is associated in the treatment of one of the following poisoning condition
- Abrus precatorius
  - Lantana camara
  - Ricinus cummunis
  - Strychnus nuxvomica
28. One of the following is commonly called as bracken fern poisoning
- Pteridium aquilinum
  - Lantana camara
  - Ricinus cummunis
  - Strychnus nuxvomica
29. Astragalus sp. Is
- Obligate Se accumulator
  - Passive Se accumulator
  - Facultative Se accumulator
  - None of the above
30. Acute ANTU intoxication is characterized by
- Cardiac toxicity
  - Neurotoxicity
  - Pulmonary toxicity
  - All the above
31. Which is botanical rodenticide
- ANTU
  - Red squill
  - ZnP
  - All the above
32. Bovine bunker syndrome in cattle is due to
- Ammonia / NPN poisoning
  - Oxalate poisoning
  - Salt poisoning
  - All the above
33. Calomel is
- Mercurous chloride
  - Mercuric chloride
  - Mercurochrome
  - None of the above
34. The antidote for cyanide poisoning is
- Sodium nitrite
  - Sodium thiosulphate
  - Both of the above
  - None of the above
35. Lantana camara is primarily a
- Hepatotoxic
  - Cardiotoxic
  - Renotoxic
  - None of the above
36. Which of the following is true with regard to MOA of Arsenic poisoning

- a) Uncouples oxidative phosphorylation  
 b) Impairs TCA cycle  
 c) Both the above  
 d) None of the above
37. The chemical constituent commonly found in the commercially available mosquito repellants is
- a) Parathion  
 b) Amitraz  
 c) Allethrin  
 d) Bromdioline
38. Roaring in horses is caused by RECURRENT LARYNGEAL nerve paralysis due to the toxicity of
- a) Pb  
 b) HCN  
 c) Se  
 d) Strychnine
39. HCN contents are more in
- a) Mature plants  
 b) Young plants  
 c) Dried plants  
 d) All the above
40. Abrus precatorius cause toxicity due to
- a) Cytotoxic effect  
 b) Proteolytic effect  
 c) Both the above  
 d) None of the above
41. The main ingredient of universal antidote is
- a) Activated charcoal  
 b) Sodium bicarbonate  
 c) Atropine  
 d) Copper sulphate
43. To determine the LD<sub>50</sub>, the following study should be conducted
- a) Chronic toxicity study  
 b) Sub chronic toxicity study  
 c) Sub acute toxicity study  
 d) Acute toxicity study
44. Bitter almond smell of stomach content indicates poisoning with,
- a) Phosphorous  
 b) Selenium  
 c) Copper  
 d) HCN
45. In the post-mortem, Brick red mucosal membrane of GI tract lesion seen in
- a) Lead poisoning  
 b) Copper poisoning  
 c) Mercury poisoning  
 d) Arsenic poisoning
46. Garlic odour of stomach content indicates poisoning with,
- a) Phosphorous  
 b) Selenium  
 c) Copper  
 d) HCN
47. Bone is considered as a main storage site for
- a) Mercury  
 b) Selenium  
 c) Lead  
 d) Molybdenum
48. Biomagnification of poisoning is seen in
- a) Mercury  
 b) Selenium  
 c) Lead  
 d) Molybdenum
49. Desferoxamine is a specific antidote for poisoning due to



**VETERINARY PHYSIOLOGY**

1. The ideal anticoagulant for blood glucose estimation is
  - a. heparin
  - b. EDTA
  - c. sodium citrate
  - d. sodium fluoride
2. The ideal anticoagulant for blood coagulation studies is
  - a. heparin
  - b. EDTA
  - c. sodium citrate
  - d. sodium fluoride
3. The ideal anticoagulant for the study of blood cell morphology is
  - a. potassium oxalate
  - b. EDTA
  - c. sodium citrate
  - d. ammonium oxalate
4. The anticoagulant not recommended for BUN estimation is
  - a. sodium fluoride
  - b. EDTA
  - c. sodium citrate
  - d. ammonium oxalate
5. The anticoagulant commonly used for blood transfusion is
  - a. potassium oxalate
  - b. EDTA
  - c. sodium citrate
  - d. sodium fluoride
6. Heparin acts as an anticoagulant by acting along
  - a. Antithrombin III
  - b. Factor III
  - c. Factor XIII
  - d. Factor I
7. The water content of plasma is
  - a. 99-100%
  - b. 91-92%
  - c. 75-80%
  - d. 45-50%
8. The solid content of plasma is
  - a. Nil
  - b. 8-9%
  - c. 15-20%
  - d. 50-55%
9. The yellow colour of plasma is due to
  - a. bile salt
  - b. bilirubin
  - c. carotene
  - d. both b and c
10. The colloidal osmotic pressure of blood is maintained by
  - a. albumin
  - b. globulin
  - c. creatinine
  - d. phospholipids
11. All the circulating mammalian erythrocytes are
  - a. non nucleated and nonmotile
  - b. non nucleated and motile
  - c. nucleated with no organelles
  - d. motile with no organelles
12. The erythrocytic enzyme which facilitates carbon dioxide transport in blood is
  - a. carboxydehydrogenase
  - b. carboxyhydrogenase
  - c. carbonic anhydrase
  - d. carboxylase
13. The avian erythrocytes are
  - a. biconvex and nucleated
  - b. biconcave and nucleated

- c. elliptical and nucleated      d. elliptical and non nucleated
14. The haemoglobin content of solid portion of erythrocytes is  
a. 15%                                      b. 24%                                      c. 75%                                      d. 95%
15. The total surface area of mammalian erythrocyte is  
a. 10-20m<sup>2</sup>/kg                              b. 27-37m<sup>2</sup>/kg                              c. 40-50m<sup>2</sup>/kg                              d. 57-67m<sup>2</sup>/kg
16. The lifespan of erythrocytes can be measured by tagging with isotopes of  
a. <sup>11</sup>Se                                      b. <sup>22</sup>Cr                                      c. <sup>14</sup>Fe                                      d. <sup>32</sup>P
17. The principle site of erythrocyte destruction in domestic animals is  
a. bone marrow                              b. spleen                                      c. liver                                      d. lymph nodes
17. The principle site of erythrocyte destruction in birds is  
a. bone marrow                              b. spleen                                      c. liver                                      d. lymph nodes
18. Complete blockage of bile duct may be diagnosed by urinary absence of  
a. biliverdin      b. bilirubin      c. urobilinogen                              d. bilirubindigluconide
19. Extrarenal source of erythropoietin production in mammals is  
a. liver                              b. lymph nodes                              c. lungs                                      d. bone marrow
20. Biosynthesis of haemoglobin starts in  
a. rubricyte      b. metarubricte                              c. rubriblast                                      d. reticulocyte
21. One gram of haemoglobin carries \_\_\_\_\_ ml of oxygen  
a. 4.0                                      b. 1.34                                      c. 15.4                                      d. 19.6
22. Non toxic useless respiratory pigment is  
a. myoglobin      b. methaemoglobin      c. carboxyhaemoglobin                              d. oxyhaemoglobin
23. Pyrogens are produced from  
a. lymphocytes                              b. monocytes                                      c. basophils                                      d. neutrophils
24. Stress conditions or exogenous ACTH administration leads to  
a. eosinopenia                              b. eosinophilia                                      c. lymphocytosis                              d. monocytoysis
25. The shift to left denotes all except,  
a. bacterial infections    b. inflammation  
c. increase in immature neutrophils    d. increase in immature lymphocytes

26. The lifespan of platelets in circulating blood is  
a. 2-3days                      b. 8-11 days                      c. 50-60days                      d.100-120days
27. Hemal lymph nodes are the site of granulopoiesis in  
a. dogs                      b. cattle                      c. horse                      d. birds
28. The naturally occurring antibody against erythrocytes is  
a.Ig A                      b.IgD                      c.IgM                      d.IgG
29. The immunoglobulin that does not cross placental barrier is  
a.Ig A                      b.IgD                      c.IgM                      d.IgG
30. Blood volume (ml/kg body weight) of cattle is  
a.12-24                      b.27-36                      c. 38-47                      d.52-60
31. All are platelet aggregation and activation agonists,except  
a.thrombin                      b.ADP c.epinephrine                      d.protein C
32. All have anticoagulant activity, except  
a.thrombomodulin                      b.von Willebrand factor                      c.plasmin  
d. $\alpha_2$ macroglobulin
33. The contact phase of coagulation is absent in  
a.cattle                      b.dogs                      c.horse                      d.birds
34. The factor XII is absent in  
a.marine mammals                      b.birds                      c.horse                      d.ruminants
35. Buccal mucosal bleeding time is a reliable test to diagnose  
a. haemophilia                      b.platelet dysfunctionc.liver dysfunctiond.ingestion of rodenticide
36. The coagulation factor with shortest half life is  
a.Factor IV                      b. Factor V                      c. FactorVII                      d. . Factor X
37. The cells having contractile and phagocytic activity in the Juxtaglomerular apparatus are  
a.maculadensa b.JG cells                      c.mesangial cells                      d.peritubular cells
38. Filtration fraction refers to  
a.GFR/RPF ratio                      b.GFR/RBF ratio                      c.RPF/GFR ratio                      d.RBF/GFR ratio
39. The substance readily filtered in the glomerulus is

- a.negatively charged      b.positively charged      c.globular shaped      d. neutral charged
40. Almost 65% of the  $\text{Na}^+$  reabsorption occurs in the  
a.PCT      b.loop of henle      c.DCT      d.collecting duct
41. Proximal convoluted tubule accounts for \_\_\_\_\_% of glucose absorption  
a.25      b.50      c.75      d.100
42. Glucose and aminoacids are reabsorbed in nephron tubules by  
a.cotransport      b.countertransport      c.passive diffusion      d.all the above
43. Hyperosmolarity of renal medulla is facilitated by all except  
a.increased medullary  $\text{Na}^+$       b. recirculation of urea      c. sluggish medullary blood flow  
d. increased medullary  $\text{Ca}^{2+}$
44. Regulation of  $\text{Ca}^{2+}$  reabsorption primarily occurs in  
a.PCT      b.loop of henle      c.DCT      d.collecting duct
- 45.Micturition reflex is regulated by  
a. cerebral cortex      b.cerebellum      c.hypothalamus      d.spinal cord and brain stem
- 46.Plasma clearance is lowest for  
a.creatinine      b.inulin      c. urea      d.para amino hippuric acid
- 47.Renal portal system is a unique feature in the kidneys of  
a.swine      b.birds      c.equines      d.canines
- 48.Antidiuretic hormone of birds is  
a.argininevasotocin      b.arginine vasopressinc.arginine leucine      d. arginine isoleucine
- 49.Decrease in GFR results due to  
a. increased sympathetic stimulation      b. decreased sympathetic stimulation  
c. dilation of afferent arterioles      d. increased blood pressure
- 50.Uric acid in birds is formed in the  
a.liver      b.kidney      c.liver and kidney      d.cloaca
- 51.Costal breathing is observed during all conditions,except  
a.normal respiration      b.breathing difficulty      c. pneumothorax      d. pain in abdomen
52. Panting in dogs results in all except  
a. increased dead space ventilation      b. decreased dead space ventilation  
c. constant alveolar ventilation      d. hyperventilation



53. All the following will result in shifting of oxyhaemoglobin dissociation curve to right except,

- a. decrease in  $H^+$
- b. increase in carbondioxide
- c. increase in 2,3diphosphoglycerate
- d. increase in blood temperature

54. Majority of the carbondioxide is transported in blood as

- a. bicarbonate
- b. carbamino compound
- c. dissolved  $CO_2$
- d. carbonic acid

55. The inspiratory volume and respiratory rate is controlled mainly by

- a. dorsal respiratory group
- b. ventral respiratory group
- c. pneumotaxic centre
- d. apneustic centre

56. Increased alveolar ventilation results due to

- a. increase in  $PO_2$
- b. increase in  $PCO_2$
- c. increase in  $H^+$
- d. decrease in  $PO_2$

57. Decrease in oxygen concentration of the arterial blood is

- a. hypoxia
- b. hypoxemia
- c. asphxia
- d. anoxia

58. All are vasodilators except

- a. Prostacyclin
- b. Thromboxane  $A_2$
- c. kinins
- d. nitric oxide

59. The greatest left ventricular volume is achieved during which one of the following periods of the cardiac cycle?

- a. Isovolumetric ventricular relaxation
- b. rapid filling
- c. diastasis
- d. atrial systole

60. The v wave of the atrial pressure curve corresponds most closely to which one of the following?

- a. Atrial contraction
- b. Ventricular contraction and bulging of the A-V valves back into the atria
- c. Continued filling of the atria from the veins during ventricular relaxation
- d. Closure of the semilunar valves

61. Which one of the following periods of the cardiac cycle is the first period normally associated with ventricular diastole?

- a. Atrial contraction
- b. Isovolumetric relaxation
- c. Rapid filling
- d. Diastasis

62. The third heart sound, S3, is most closely associated with which one of the following periods of the cardiac cycle?

- a. Atrial contraction
- b. Isovolumetric contraction
- c. Rapid ejection
- d. Rapid filling

63. The depolarization phase of the atrioventricular nodal action potential is most closely associated with the movement of cations through which one of the following types of channels?

- a. Sodium "leak" channels
- b. Fast voltage-gated sodium channels
- c. Slow voltage-gated calcium channels
- d. Potassium channels

64. The binding of acetylcholine to cardiac muscarinic cholinergic receptors causes a decrease in the heart rate that results from an increase in which one of the following?

- a. Calcium influx
- b. Potassium efflux
- c. Sodium influx
- d. Chloride efflux

65. Which one of the following electrocardiographic leads is a bipolar lead?

- a. Lead aVR
- b. Lead V4
- c. Lead III
- d. Lead aVF

66. The T wave of normal ECG is

- a. Always negative
- b. Always positive if R wave is positive
- c. caused by delay in between atrial and ventricular depolarization
- d. caused by ventricular repolarization

67. An increase in atrial pressure results in which one of the following?

- a. Decrease in plasma atrial natriuretic peptide
- b. An increase in plasma angiotensin II concentration
- c. An increase in plasma aldosterone concentration
- d. An increase in heart rate

68. Which of the following components of the circulatory system has the largest distribution of blood volume?

- a. Arteries
- b. Capillaries
- c. Veins
- d. ventricles

69. The velocity of blood flowing through the circulatory system is lowest in which of the following parts of the circulation?

- a. Venules
- b. Veins
- c. Small arteries
- d. Capillaries

70. Which one of the following parts of the circulation has the highest compliance?

- a. Capillaries
- b. Veins
- c. Aorta
- d. Arteries

71. Water retention by ADH is achieved by its action on

- a. PCT
- b. DCT
- c. loop of henle
- d. collecting duct

72. What percentage of cardiac output is renal blood flow

- a. 5
- b. 15
- c. 25
- d. 30

73. The substance that is actively secreted into the tubular fluid by the tubular cells is

- a.  $\text{Na}^+$                                       b.  $\text{K}^+$                                       c. Glucose                                      d.  $\text{Cl}^-$

74. The major anion responsible for VFA exchange in omasum is

- a.  $\text{Cl}^-$                                       b. bicarbonate                                      c. phosphate                                      d.  $\text{K}^+$

75. Which of the following statements is TRUE regarding the pressure changes in the cardiac cycle?

- a. pressure developed during ventricular systole is equal between right and left side  
b. pressure developed in left ventricle is higher than the right ventricle during systole  
c. pressure developed in left ventricle during systole is equal to the aortic pressure  
d. atrial and ventricular pressures are equal during ventricular systole

76. Increase in heart rate due to increase in venous return is known as

- a. Baroreceptor reflex                                      b. Psychogenic reflex  
c. vasovagal reflex                                      d. Bainbridge reflex

77. The most important factor that has the greatest influence on flow of blood in the vessels is

- a. radius of the vessel                                      b. pressure difference                                      c. viscosity                                      d. length of the vessel

78. Concerning coronary circulation, which of the following is TRUE?

- a. Under normal condition, cardiac muscle extract 15ml  $\text{O}_2$ /100ml blood  
b. 10% of cardiac output flow through coronary circulation  
c. Blood flow to ventricular muscle is greater during systole than diastole  
d. Major control of coronary circulation is neural rather than metabolic

79. During systemic hypoxia

- a. pulmonary and systemic blood vessels constrict  
b. pulmonary vessels constrict and systemic vessels dilate  
c. pulmonary vessels dilate and systemic vessels constrict  
d. pulmonary and systemic vessels dilate

80. The tendency to form oedema will be increased by

- a. arteriolar constriction                                      b. increased venous pressure  
c. increased plasma protein concentration                                      d. dehydration

81. Which of the following enzymes is NOT secreted by the small intestine?

- a. Maltase                                      b. sucrase                                      c. lactase                                      d. trypsinogen

82. Monensin is added to the ruminant diet mainly to

- a. protect protein hydrolysis                                      b. increase cellulose digestion  
c. improve vitamin synthesis                                      d. inhibit methanogenesis



94. In domestic animals, thermal sweating is contributed by

- a. apocrine glands  
b. apocrine and eccrine glands  
c. eccrine glands  
d. mesocrine glands

95. Which of the following species DOES NOT depend on thermoregulatory sweating for heat dissipation?

- a. horse  
b. cattle  
c. birds  
d. camel

96. Lactation can be artificially induced by injection of

- a. injection of lactogen  
b. large dose of oxytocin  
c. injection of bovine somatotropin  
d. injection of LH

97. The milk let-down reflex in dairy animals is initiated by

- a. a rise in intramammary pressure  
b. tactile stimulation of the teats  
c. a decline in progesterone secretion after calving  
d. a rise in prolactin secretion

98. Hormone involved in mammary lobulo alveolar growth is

- a. estrogen  
b. prolactin  
c. progesterone  
d. growth hormone

99. Hormone involved in mammary duct growth is

- a. estrogen  
b. prolactin  
c. progesterone  
d. growth hormone

100. Hormone involved in prolactin release inhibition is

- a. estrogen  
b. dopamine  
c. oxytocin  
d. epinephrine

Answer Key

Question No.	Answer	Question No.	Answer	Question No.	Answer	Question No.	Answer
1	d	26	b	51	a	76	d
2	c	27	b	52	b	77	a
3	b	28	c	53	a	78	b
4	d	29	a	54	a	79	b
5	c	30	d	55	c	80	b
6	a	31	d	56	d	81	d
7	b	32	b	57	b	82	d
8	b	33	d	58	b	83	b
9	d	34	a	59	d	84	c
10	a	35	b	60	c	85	a
11	a	36	c	61	b	86	d
12	c	37	c	62	d	87	a
13	c	38	a	63	c	88	c
14	d	39	b	64	b	89	b
15	d	40	a	65	c	90	d
16	d	41	d	66	d	91	b
17	a	42	a	67	d	92	c
18	c	43	d	68	c	93	c
19	a	44	c	69	d	94	a
20	a	45	d	70	b	95	c
21	b	46	c	71	a	96	c
22	b	47	b	72	b	97	b
23	d	48	a	73	b	98	c
24	a	49	a	74	a	99	a
25	d	50	c	75	b	100	b

**DEPARTMENT OF VETERINARY SURGERY AND RADIOLOGY**

1. Sterilization of operation theatre done by
  - a. Nitrous oxide gas
  - b. Steaming
  - c. Ethylene oxide gas
  - d. UV irradiation
2. Autoclaving of surgical instruments are carried out under
  - a. 121°C, 15lbs pressure for 15 mts
  - b. 350°C, 15lbs pressure for 15 mts
  - c. 150°C, 15lbs pressure for 30 mtsd.
  - d. 121°C, 15lbs pressure for 60 mts
3. Cellulitis is inflammation of
  - a) Skin
  - b) Mucosa
  - c) Muscle
  - d) Connective tissue
4. Lembert pattern suture is used in
  - a) Intestine
  - b) Oesophagus
  - c) Hollow organ
  - d) none of the above
5. Cryo surgery is done by using
  - a) Carbon dioxide
  - b) Nitrous gas
  - c) Liquid nitrogen
  - d) none of the above
6. A fresh, sutured wound heals by
  - a) First intention
  - b) Scab formation
  - c) Second intention
  - d) Mixed intention
7. Inherent capability of the suture material to return to original gross shape is called as
  - a. Elasticity
  - b. Capillarity
  - c. Flexibility
  - d. Memory
8. The commonly used chemical for tissue adhesion for surgical procedures in dog is
  - a. Polymethyl methocrylate
  - b. Cyanoacrylate
  - c. Polyurethane
  - d. polypropylene
9. An example for tendon suture is
  - a. Cushing
  - b. Bunnel
  - c. Lembert
  - d. Parker-kerr
10. The wound is known as infected when the bacterial count exceeds
  - a.  $10^5$  bacteria/gm
  - b.  $10^6$  bacteria/gm
  - c.  $10^8$  bacteria/gm
  - d.  $10^7$  bacteria/gm
11. Radical surgery is surgery done to
  - a. Conserve damaged tissue
  - b. Remove damaged tissue
  - c. Eliminate root cause
  - d. Correct malformations
12. Lembert suture include in its bite
  - a. Serosa
  - b. Serosa, muscles and submucosa
  - c. Submucosa and mucosa
  - d. Mucosa alone

13. Overlapping sutures are applied to close  
 a. Rumens wound  
 b. Abomasal wound  
 c. Hernial ringd. Wound on tongue
14. A swelling that develop slowly and devoid of inflammatory symptoms  
 a) Cyst  
 b) Tumor  
 c) Haematoma  
 d) Abscess
15. Ulcer may be formed due to  
 a) Impaired nutrition  
 b) Chronic irritation  
 c) Vasomotor disturbances  
 d) Bacterial infection
16. The binding material in wound is laid by  
 a) Blood vessels  
 b) Endothelial cells  
 c) Fibroblast cells  
 d) Epithelial cells
17. Scald is injury produced by  
 a. Acids  
 b. Alkali  
 c. Steamd. Flame
18. Father of modern surgery is  
 a. Halsted  
 b. W.C.Roentgen  
 c. Joseph Lister  
 d. R.Eberlin
19. Wound does not showing tendency to heal is \_\_\_\_\_ wound  
 a. Ulcerated wound  
 b. Proud flesh  
 c. Granulatingd. Aseptic wound
20. \_\_\_\_\_ is the method of heating the tissues in depth by passing through them modified high frequency electric current  
 a. UV irradiation  
 b. Infrared therapy  
 c. Ultrasound therapy  
 d. Diathermy
21. The main reason for atropine premedication in xylazine anaesthesia is to  
 a) Reduce salivation  
 b) Muscle relaxation  
 c) Prevent bradycardia  
 d) Hasten sedation
22. Intravenous pyleography is a radiographic technique used to diagnose  
 a) Urethral calculi  
 b) Cystic calculi  
 c) Kidney function  
 d) Bladder emptying
23. Biological effect of X-ray used for treatment of cancer is based on its affinity towards  
 a) Degenerating cells  
 b) Fast multiplying cells  
 c) Regenerating cells  
 d) Blood cells
24. In radiographic parameters, one of the following is considered constant  
 a) Time  
 b) Part film distance  
 c) Kilo voltage peak  
 d) Milliamperage seconds



25. Surgical anaesthesia produced by combining two or more drugs or anaesthetic techniques is called  
 a) Combination of anaesthesia  
 b) General anaesthesia  
 c) Basal anaesthesia  
 d) Balanced anaesthesia
26. Difference in intensity across the X-ray beam is called  
 a) Edge effect  
 b) Roentgen effect  
 c) Heel effect  
 d) Keel effect
27. Cat gut is obtained from  
 a) Submucosa of cat intestine  
 b) Submucosa of cattle intestine  
 c) Submucosa of sheep intestine  
 d) Mucosa of sheep intestine
28. Hypoventilation with retention of carbon dioxide may result into  
 a) Metabolic acidosis  
 b) Metabolic alkalosis  
 c) Respiratory acidosis  
 d) Respiratory alkalosis
29. Surgical anaesthesia is achieved under  
 a) Stage I  
 b) Stage II  
 c) Stage III  
 d) Stage IV
30. The Penetrating power of X-ray beam depend on  
 a) Kvp  
 b) MAs  
 c) FFD  
 d) FPD
31. Name one anesthetic which is in steroid in nature  
 a) Propofol  
 b) Etomidate  
 c) Althesin  
 d) Ketamine
32. Dilated pupil and fish eye is in which stage of anaesthesia  
 a) Stage I  
 b) Stage II  
 c) Stage III  
 d) Stage IV
33. The quality of radiograph depend on  
 a) Kvp  
 b) MAs  
 c) FFD  
 d) All of the above
34. It is an alpha-2 adrenoceptor agonist used for preanaesthetic medication  
 a) Ketamine  
 b) Thiopentone sodium  
 c) Atrophine  
 d) Xylazine
35. Nystagmus commonly occur in which stage of anaesthesia in horse  
 a) Stage 1  
 b) Stage II  
 c) Stage III  
 d) Stage IV
36. Peterson block is a technique used to anaesthetize the.....  
 a).Eye ball  
 b) Upper Eyelid  
 c) Lower Eyelid  
 d) All the above

37. The most common complication in mid ventral abdominal laprotomy in dog is  
 a) Adhesion  
 b) Incisional hernia  
 c) Fibrosis of suture line  
 d) Self mutilation
38. Bradycardia and second degree AV block is caused by over dosage of  
 a) Xylazine  
 b) Ketamine  
 c) Haothane  
 d) Thiopentone
39. Chronic luxation of patella can be relieved by  
 a) Middle ligament  
 b) Medial ligament  
 c) Lateral straight ligament  
 d) Cruciate ligament
40. Failure of cells of vital organ to perform normal metabolic function despite availability of oxygen is noticed in  
 a) Cardiogenic shock  
 b) Septic Shock  
 c) Hypovolemic shock  
 d) Distributive Shock
41. Dose rate of xylazine in horse is  
 a) 1-2 mg/kg  
 b) 1.1mg/kg  
 c) 2.2mg/kg  
 d) 0.1mg/kg
42. Succinyl choline is a \_\_\_\_\_ muscle relaxant  
 a) Non depolarizing blocking agent  
 b) Depolarizing blocking agent  
 c) Local analgesic  
 d) Pain killer
43. In a X-ray machine the radiation intensity will be higher in  
 a) Anode  
 b) Cathode  
 c) Both side  
 d) None of the above
44. Cystography is a contrast radiography of  
 a) Gall bladder  
 b) Ovary  
 c) Urinary bladder  
 d) None of the above
45. Grid is placed in between  
 a) The x ray tube and the patient  
 b) The patient and the table  
 c) The patient and the cassette  
 d) The table and the cassette
46. The most radiosensitive body system is  
 a) Nervous system  
 b) Skeletal system  
 c) Reproductive system  
 d) Urinary system
47. Pulse echo principle is used in  
 a) X-rays  
 b) Fluroscopy  
 c) Ultra sound  
 d) Nuclear Scintigraphy
48. In X-ray production the energy distribution will be  
 a) Heat energy 99% and X-ray 1%  
 b) X-ray 99% and kinetic energy 1%  
 c) X-ray 50% and kinetic energy 50%  
 d) X-ray 10% and Heat 90%





73. Object film distance is  
 a) 0 cm  
 b) 100 cm  
 c) 8 cm  
 d) 70cm
74. Azaperone is best anesthetic for  
 a) Cattle  
 b) Horse  
 c) Cats  
 d) Swine
75. A local anaesthetic with long duration of action is  
 a) Lidocaine  
 b) Bupivacaine  
 c) Procaine  
 d) Cocaine
76. The principle ingredient in developing solution is  
 a. Hypo  
 b. Metol  
 c. Sodium carbonate  
 d. Potassium bromide
77. The best projection for imaging the pelvis is  
 a. Ventro-dorsal view  
 b. Lateral view  
 b. Cranio-caudal view  
 d. Dorso ventral view
78. Acoustic shadowing in ultrasound is caused due to  
 a. Air  
 b. Fluid  
 c. Calculi  
 d. All the three
79. X-rays were discovered by  
 a. Hounsfield  
 b) Roentgen  
 c. Virchow  
 d. Galileo
80. The surgery done to improve the body appearance of an animal is called  
 a. Elective surgery  
 b. Cosmetic Surgery  
 c. Exploratory surgery  
 d. None of the above
81. Hemorrhage control by application of epinephrine is due to\_\_\_\_  
 A. Vasodilation  
 b. Vasoconstriction  
 c. Both a and b  
 d. None of the above
82. The use of hyaluronidase is done to increase\_\_\_\_\_ anaesthesia  
 a. Duration of action  
 b. Area of spread  
 c. Both a and b  
 d. None of the above
83. Ketamine administration leads to\_\_\_\_\_  
 a. Catalepsy  
 b. Tachypnea  
 c. Bradycardia  
 d. None of the above
84. \_\_\_\_\_ is mostly used to reduce intracranial pressure  
 a. Mannitol  
 b. Dextrose  
 c. RI  
 d. DNS
85. Rumenotomy is a form of \_\_\_\_\_ surgery  
 a. Cosmetic  
 b. Bariatric

- c.Exploratory  
d. Orthopaedic
86. The third degree burns is categories when it involve  
a. Dermis  
b. Epidermis  
c. Fascia  
d. Muscles
87. Which is a butyrophenol derivative  
a. Azaperone  
b. Acepromazine  
c. Etorphine  
d. Diazepam
88. Amide group of Local anesthetic  
a. Lignocaine  
b. Procaine  
c. Tetracaine  
d. Cocaine
89. The normal exposure capacity of portable x-ray machine is  
a. 40 mA  
b. 35 mA  
c. 100 mA  
d. 60 mA
90. Ultrasound scanning image of fluid is  
a. Hyperechoic  
b. Hypoechoic  
c. Isoechoic  
d. Anechoic
91. Misplaced embryonic tissue with hair is  
a. Dermoid cyst  
b. Urachal cyst  
c. Ranula  
d. Dentigerous cyst
92. Drug used as cardiac stimulation  
a. Lignocaine  
b. Naloxone  
c. Dopamine  
d. Doxapram
93. Flumazenil is used for reversal of  
a. Diazepam  
b. Xylazine  
c. Acepromazine  
d. Ketamine
94. Grid is used when the thickness of body exceeds  
a. 10cm  
b. 15cm  
c. 20 cm  
d. 6 cm
95. Second gas effect is noticed when \_\_\_\_\_ inhalation anesthetic agent is used.  
a. Isoflurane  
b. Nitrous oxide  
c. Sevoflurane  
d. Halothane
96. The agents used for sterilization of inanimate objects are called  
a. Sterilization  
b. Antiseptic  
c. Disinfectant  
d. Asepsis
97. Epulis are tumors of \_\_\_\_\_  
a. Tooth  
b. Gum  
c. Enamel  
d. Soft palate
98. Antiseptic that is active in organic matter \_\_\_\_\_  
a. Tincture iodine  
b. acriflavin

- |   |   |
|---|---|
| <p>c. <math>Kmno_4</math></p> <p>99. Ideal age for disbudding in calves is</p> <p style="margin-left: 20px;">a. 5 days</p> <p style="margin-left: 20px;">c. 5 - 15 days</p> <p>100. KVP setting in an x-ray machine decides the</p> <p style="margin-left: 20px;">a. Quality of x-rays</p> <p style="margin-left: 20px;">c. Direction of x-rays</p> | <p>d. Povidone iodine</p> <p>b. 5-10 days</p> <p>d. 10 - 15 days</p> <p>b. Quantity of x-rays</p> <p>d. intensity of ionization</p> |
|---|---|

Answers

1.D	11.C	21.C	31.C	41.B	51.C	61.A	71.D	81.B	91.A
2. A	12.B	22.C	32.D	42.B	52.A	62.A	72.C	82.B	92.C
3. D	13.C	23.B	33.D	43.B	53.D	63.A	73.A	83.A	93.A
4.C	14.A	24.B	34.D	44.C	54.C	64.B	74.D	84.A	94.A
5.C	15.B	25.D	35.B	45.B	55.A	65.C	75.B	85.C	95.B
6.A	16.C	26.C	36.A	46.C	56.B	66.B	76.B	86.D	96.C
7 D	17.C	27.C	37.B	47.C	57.D	67.A	77.A	87.A	97.B
8 B	18.C	28.C	38.A	48.A	58.A	68.C	78.C	88.A	98.B
9. B	19.A	29.C	39.B	49.C	59.A	69.D	79.B	89.B	99.B
10.A	20.D	30.A	40.B	50.B	60.B	70.A	80.B	90.C	100.A