

118

QUESTION PAPER
SERIES CODE

B

Registration No. :

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Centre of Exam. : _____

Name of Candidate : _____

Signature of Invigilator

COMBINED ENTRANCE EXAMINATION, 2016

M.V.Sc. ANIMAL BIOTECHNOLOGY

[Field of Study Code : MVS]

Time Allowed : 3 hours

Maximum Marks : 240

INSTRUCTIONS FOR CANDIDATES

Candidates must read carefully the following instructions before attempting the Question Paper :

- (i) Write your Name and Registration Number in the space provided for the purpose on the top of this Question Paper and in the Answer Sheet.
- (ii) **Please darken the appropriate Circle of Question Paper Series Code on the Answer Sheet.**
- (iii) The Question Paper is divided into two Parts : Part—A and Part—B. Both Parts have multiple-choice questions. All answers are to be entered in the Answer Sheet provided with the Question Paper for the purpose.
- (iv) Part—A consists of 60 questions and all are compulsory. Answer all the questions in the Answer Sheet provided for the purpose by darkening the correct choice, i.e., (a) or (b) or (c) or (d) with BALLPOINT PEN only against each question in the corresponding circle. Each correct answer carries 1 mark. **There will be negative marking and ½ mark will be deducted for each wrong answer.**
- (v) Part—B consists of 100 questions. **Answer any 60 questions** in the Answer Sheet by darkening the correct choice, i.e., (a) or (b) or (c) or (d) with BALLPOINT PEN only against the corresponding circle. Each correct answer carries 3 marks. **There will be negative marking and 1 mark will be deducted for each wrong answer.**

In case any candidate answers more than the required 60 questions, the first 60 questions attempted will be evaluated.

- (vi) Answer written by the candidates inside the Question Paper will not be evaluated.
- (vii) Calculators and Log Tables may be used.
- (viii) Pages at the end have been provided for Rough Work.
- (ix) Return the Question Paper and Answer Sheet to the Invigilator at the end of the Entrance Examination. **DO NOT FOLD THE ANSWER SHEET.**

INSTRUCTIONS FOR MARKING ANSWERS

1. Use only Blue/Black Ballpoint Pen (do not use Pencil) to darken the appropriate Circle.
2. Please darken the whole Circle.
3. Darken ONLY ONE CIRCLE for each question as shown in example below :

Wrong ● (b) (c) ●	Wrong ✗ (b) (c) (d)	Wrong ✗ (b) (c) (d)	Wrong ● (b) (c) ●	Correct (a) (b) (c) ●
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4. Once marked, no change in the answer is allowed.
5. Please do not make any stray marks on the Answer Sheet.
6. Please do not do any rough work on the Answer Sheet.
7. Mark your answer only in the appropriate space against the number corresponding to the question.
8. **Ensure that you have darkened the appropriate Circle of Question Paper Series Code on the Answer Sheet.**

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PART—A

Answer all questions

1. If $\cos\theta + \sec\theta = 2$, then the value of $\cos^n\theta + \sec^n\theta$ is
- (a) 3
 - (b) 4
 - (c) 2
 - (d) 5
2. The cube roots of 'a' where a is a non-zero negative real number, are
- (a) $-(-a)^{1/3}, -\omega(-a)^{1/3}, -\omega^2(-a)^{1/3}$
 - (b) $-a^{1/3}, \omega a^{1/3}, \omega^2 a^{1/3}$
 - (c) $a^{2/3}, \omega a^{1/3}, -\omega^2(-a)^{2/3}$
 - (d) $a^{3/2}, \omega a^{2/3}, -\omega^3(-a)^{2/3}$

where 1, ω , ω^2 are cube roots of unity.

3. Let x be a rational number and y be an irrational number. Then
- (a) $x + y + \sqrt{3}$ is an irrational number
 - (b) $x + y + 2$ is a rational number
 - (c) $xy + 2$ is a rational number, if $x \neq 0$
 - (d) $x - y$ is a rational number
4. The function f given by $f(x) = |x - 2|$, $x \in \mathbb{R}$ is
- (a) differentiable at $x = 2$
 - (b) not differentiable at $x = 2$
 - (c) everywhere differentiable
 - (d) nowhere differentiable

5. For what value of a the function f defined by

$$f(x) = \begin{cases} 5 & , \text{ if } x \leq 2 \\ 15ax & , \text{ if } 2 < x < 10 \\ 21x^4 & , \text{ if } x \geq 10 \end{cases}$$

is continuous at $x = 2$?

- (a) 0
- (b) 1
- (c) 3
- (d) 1/6

6. For what value of x , the expression $\frac{1+x+x^2}{1-x+x^2}$ has minimum value?
- (a) 0
(b) -1
(c) 3
(d) $1/3$
7. The slope of the tangent to the curve $y = x^3 - x$ at $x = 2$ is
- (a) 12
(b) 13
(c) 11
(d) 10
8. The equation of line having slope 2 and being tangent to the curve $y + x^2 = 0$ is
- (a) $y - 2x = 1$
(b) $y + 2x + 1 = 0$
(c) $y + 2x + 2 = 0$
(d) $2x - y + 2 = 0$
9. The slope of the tangent to the curve $x = t^2 + 3t - 8$, $y = 2t^2 - 2t - 5$ at the point $(1, -1)$ is
- (a) $22/7$
(b) $6/7$
(c) $7/6$
(d) $10/13$
10. The normal at the point $(-1, 1)$ on the curve $2y + x^2 = 3$ is
- (a) $x + y = 0$
(b) $xy = 0$
(c) $x + y + 1 = 0$
(d) $xy = 1$

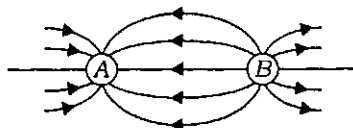
11. The greatest integer function defined by $f(x) = [x]$, $0 < x < 3$ is
- (a) not differentiable at $x = 1$ and $x = 2$
 - (b) nowhere differentiable
 - (c) differentiable at $x = 1$ but not at $x = 2$
 - (d) differentiable at $x = 2$ but not at $x = 1$
12. The function $f(x) = \cos x$ is
- (a) odd
 - (b) even
 - (c) even and odd
 - (d) Neither odd nor even
13. The interval for which the expression $|x + 7| < 10$ is satisfied, is
- (a) $(-17, 3)$
 - (b) $(-17/2, 1/2)$
 - (c) $(17/2, 3/2)$
 - (d) $(-17/3, 3/2)$
14. A die is thrown twice. The probability that the sum of points obtained is 7, is
- (a) $7/36$
 - (b) $4/36$
 - (c) $1/6$
 - (d) $11/36$
15. Let $A = \begin{bmatrix} 2 & 3 \\ 4 & 6 \end{bmatrix}$ and $B = \begin{bmatrix} -1 & -2 \\ 4 & 6 \end{bmatrix}$. Then $A - B$ is
- (a) $\begin{bmatrix} 3 & 5 \\ 0 & 0 \end{bmatrix}$
 - (b) $\begin{bmatrix} 1 & 1 \\ 8 & 8 \end{bmatrix}$
 - (c) $\begin{bmatrix} 1 & 9 \\ 8 & 4 \end{bmatrix}$
 - (d) $\begin{bmatrix} 10 & 1 \\ 8 & 4 \end{bmatrix}$

16. The work done in moving a charge q around a full circle of radius r in electrostatic field is
- (a) $2\pi r q$
 - (b) zero
 - (c) $4\pi r q$
 - (d) $\pi r q$
17. For the photoreceptor cells in human eye, viz., rods and cones, which one is **not** correct?
- (a) Rod cells are responsible for twilight vision and cone cells for daylight vision
 - (b) Rod cells are usually located at the periphery of the retina
 - (c) Cone cells are of three types, blue, green and red
 - (d) Cone cells are much more in numbers than the rod cells
18. In an atom bomb, the reaction which occurs is
- (a) thermonuclear
 - (b) uncontrolled fission
 - (c) controlled fission
 - (d) fusion
19. The lens used to rectify long sight is
- (a) convex lens
 - (b) concave lens
 - (c) planoconcave lens
 - (d) tinted plane glass
20. Calculate the work done by a 2.0 N force (directed at a 30° angle to the vertical) to move a box a horizontal distance of 400 cm across a rough floor.
- (a) 4 J
 - (b) 4000 J
 - (c) 0.4 J
 - (d) 1 J

21. The temperature readings of Celsius and Fahrenheit scales are equal at

- (a) -40
- (b) 40
- (c) 16
- (d) -16

22. Consider the electric field lines shown in the diagram below :



From the diagram, it is apparent that object A is — and object B is —.

- (a) +, +
 - (b) -, -
 - (c) +, -
 - (d) -, +
23. If $x_1 = a \sin\left(\omega t + \frac{\pi}{6}\right)$ and $x_2 = a \cos \omega t$, then what is the phase difference between the two waves?
- (a) $\frac{\pi}{3}$
 - (b) $\frac{\pi}{6}$
 - (c) $\frac{\pi}{2}$
 - (d) π
24. Two waves having the intensities in the ratio of 9 : 1 produce interference. The ratio of maximum to minimum intensity is equal to
- (a) 10 : 8
 - (b) 9 : 1
 - (c) 4 : 1
 - (d) 2 : 1
25. If a hole is bored along the diameter of the earth and a stone is dropped into the hole, then
- (a) the stone reaches the centre of the earth and stops there
 - (b) the stone reaches the other side of the earth and stops there
 - (c) the stone executes simple harmonic motion about the centre of the earth
 - (d) the stone reaches the other side of the earth and escapes into space



26. According to Einstein's photoelectric equation, the graph of maximum kinetic energy of photoelectrons emitted versus the frequency of the incident radiation gives a straight line graph, whose slope
- (a) is same for all metals and independent of the intensity of the incident radiation
 - (b) depends on the nature of the metal
 - (c) depends on the intensity of the incident radiation
 - (d) depends on the nature of the metal and also on the intensity of incident radiation
27. In which process the internal energy of the system remains constant?
- (a) Adiabatic
 - (b) Isochoric
 - (c) Isobaric
 - (d) Isothermal
28. Initial mass of a radioactive substance is 400 mg. Its half-life is 100 hours. How much of the substance will be left after 300 hours?
- (a) 20.7 mg
 - (b) 33.3 mg
 - (c) 50 mg
 - (d) 95.7 mg
29. Continuous spectra of X-rays is produced
- (a) when electrons of the target move from outer to inner orbits
 - (b) when electrons are accelerated towards the target
 - (c) when electrons of the target move from inner to outer orbits
 - (d) when the nucleus of the target is excited
30. In a standing wave, the separation between two consecutive nodes is
- (a) λ
 - (b) $\lambda/2$
 - (c) $\lambda/3$
 - (d) $\lambda/4$

31. Necrosis is a symptom which is recognized by
- (a) pattern coloration of leaves
 - (b) little leaves
 - (c) outgrowth
 - (d) death of tissues
32. The phenomenon of maturation of gynoecium earlier than the anthers of same flower is known as
- (a) protandry
 - (b) protogyny
 - (c) herkogamy
 - (d) dichogamy
33. A bioreactor is
- (a) culture for synthesis of new chemicals
 - (b) hybridoma
 - (c) culture-containing radioactive isotopes
 - (d) fermentation tank
34. Red Data Book deals with
- (a) endangered organisms
 - (b) animals on verge of extinction
 - (c) plants showing photoperiodism
 - (d) plants that are extinct
35. Blastopore is the opening of
- (a) gastrocoel
 - (b) archenteron
 - (c) coelenteron
 - (d) blastocoele



36. Substrate for photorespiration is/are
- (a) malic acid
 - (b) glycolic acid
 - (c) PGA and malic acid
 - (d) malic acid and glycolic acid
37. In garden pea, yellow seed colour is dominant over green and round seed is dominant over wrinkled seed. A cross between pure dominant plant for these two characters and pure recessive plant for the same yields yellow and round seeds in F1 progeny. When the F1 plants are selfed, F2 generation will show which of the following ratios?
- (a) 15 yellow and round seeds : 1 green and wrinkled seed
 - (b) 9 yellow and round seeds : 3 yellow wrinkled seeds : 3 green and round seeds : 1 green and wrinkled seed
 - (c) 9 yellow and round seeds : 7 green and wrinkled seeds
 - (d) None of the above
38. Which plant stores food in its leaves?
- (a) Potato
 - (b) Onion
 - (c) Banyan
 - (d) Maize
39. When parasympathetic nerve supply to heart is cut off
- (a) heart beats will stop
 - (b) heart beats will slow down
 - (c) heart beats will increase
 - (d) there will be no immediate change on heart beat rate
40. Ciliary muscles are found in which of the following organs?
- (a) Mammalian stomach
 - (b) Mammalian diaphragm
 - (c) Ciliary epithelium
 - (d) Vertebrate eye

41. If there is deficiency of ADH (antidiuretic hormone), its effect would be
- (a) the volume of urine will increase
 - (b) the volume of urine will decrease
 - (c) the pH of urine will change from 4.8 to 8.0
 - (d) secretion of urochrome will take place
42. Select the correct sequence for coagulation of blood.
- (a) Fibrin—thrombin—thromboplastin—clot
 - (b) Prothrombin—thrombin—thromboplastin—clot
 - (c) Thromboplastin—prothrombin—thrombin—fibrin—clot
 - (d) Fibrinogen—fibrin—prothrombin—thrombin—clot
43. A husband and wife have normal vision but father of both of them were colour-blind. The probability of their first daughter to be colour-blind is
- (a) 25%
 - (b) 50%
 - (c) 75%
 - (d) 0%
44. The process of engulfing other cells is called as
- (a) phagocytosis
 - (b) endocytosis
 - (c) pinocytosis
 - (d) exocytosis
45. The part of cell that is involved in lipid synthesis is
- (a) mitochondria
 - (b) Golgi complex
 - (c) nucleus
 - (d) vacuole

46. The structure of PCl_5 is of which of the following shapes?
- (a) Pentagonal planar
 - (b) Octahedral
 - (c) Tetrahedral
 - (d) Trigonal bipyramidal
47. The most abundant cations in seawater are those of
- (a) sodium and copper
 - (b) potassium and lead
 - (c) sodium and magnesium
 - (d) sodium and lithium
48. Which has the highest ionization potential?
- (a) Carbon
 - (b) Nitrogen
 - (c) Boron
 - (d) Oxygen
49. What is the oxidation number of manganese in KMnO_4 ?
- (a) 5
 - (b) 6
 - (c) 7
 - (d) 1
50. Which of the four bonds B—C , C—N , B—Si and B—F would you expect to be least polar?
- (a) B—C
 - (b) C—N
 - (c) B—Si
 - (d) B—F



51. Which of the following elements can form the greater number of covalent bonds?
- (a) Carbon
 - (b) Nitrogen
 - (c) Oxygen
 - (d) Sulphur
52. Using the molecular orbital theory, the bond order and unpaired electrons in O_2 are respectively
- (a) 2 and 2
 - (b) 2 and 1
 - (c) 1.5 and 1
 - (d) 2.5 and 1
53. There should be hydrogen bonding in
- (a) ethyl alcohol
 - (b) dimethyl ether
 - (c) acetone
 - (d) diethyl ether
54. Treatment of ores of gold with sodium cyanide solution gives
- (a) AuCN
 - (b) $Na[Au(CN)_2]$
 - (c) $Na[Au(CN)_3]$
 - (d) $Na_2[Au(CN)_2]$
55. White phosphorous is readily soluble in
- (a) water
 - (b) methanol
 - (c) carbon tetrachloride
 - (d) ethanol

56. The number of oxygen per silicon in silicates is

- (a) 3
- (b) 2
- (c) 5
- (d) 4

57. 3-methyl-3-pentanol is

- (a) primary alcohol
- (b) secondary alcohol
- (c) tertiary alcohol
- (d) aldehyde

58. Aldehydes are isomeric with

- (a) ketones
- (b) ethers
- (c) alcohols
- (d) fatty acids

59. Which one is the strongest acid?

- (a) CH_3COOH
- (b) CH_2FCOOH
- (c) CHF_2COOH
- (d) CF_3COOH

60. The Zn(II) compounds are generally

- (a) green
- (b) red
- (c) white
- (d) yellow

PART—B

Answer *any sixty* questions

61. Which of the following is synthetic non-absorbable suture?
- (a) Silk
 - (b) Nylon
 - (c) Catgut
 - (d) Linen
62. The healing of surgically sutured wound occurs by
- (a) first intention healing
 - (b) secondary union
 - (c) granulation
 - (d) second intention healing
63. An ideal complete fetotomy involves which of the following numbers of cut?
- (a) 12
 - (b) 6
 - (c) 9
 - (d) 8
64. During caesarean section in a cow, the incision is made on
- (a) body of uterus
 - (b) lesser curvature of uterus
 - (c) greater curvature of uterus
 - (d) cervix
65. Fertile life of spermatozoa in cattle is
- (a) 30–48 hours
 - (b) 12 hours
 - (c) 71–120 hours
 - (d) 15 hours

66. Which of the following is the site of fertilization of ovum in cattle?
- (a) Infundibulum
 - (b) Utero-tubal junction
 - (c) Ampullary-isthmus junction
 - (d) Uterine horn
67. Which cells of the ovary synthesize estrogen?
- (a) Theca cells
 - (b) Granulosa cells
 - (c) Luteal cells
 - (d) Interstitial cells
68. Post-service pyometra in cows is caused by
- (a) *Campylobacter fetus*
 - (b) *Brucella abortus*
 - (c) *E. coli*
 - (d) *Trichomonas fetus*
69. Transformation of secondary spermatocytes to spermatids is known as
- (a) spermatocytogenesis
 - (b) spermateliosis
 - (c) spermiogenesis
 - (d) spermiation
70. Duration of heat in cow is
- (a) 54 hours
 - (b) 18 hours
 - (c) 36 hours
 - (d) 5 hours

71. Cold shock in semen can be prevented by addition of
- (a) ethanol
 - (b) methanol
 - (c) glyceraldehyde
 - (d) glycerol
72. Anton's test is used in the diagnosis of
- (a) leptospirosis
 - (b) listeriosis
 - (c) leishmaniasis
 - (d) histoplasmosis
73. Fascioliasis if detected in bovine carcass at postmortem, requires condemnation of
- (a) only liver
 - (b) whole carcass
 - (c) only lungs
 - (d) only spleen
74. Which test is used for diagnosis of Q fever?
- (a) Casoni test
 - (b) Luoto capillary agglutination test
 - (c) Sabin-Feldman dye test
 - (d) Rothera's test
75. Which of the following vectors is responsible for transmission of Lyme disease?
- (a) *Ixodes* spp.
 - (b) *Tabanus* fly
 - (c) *Aedes aegypti*
 - (d) *Culex* spp.

76. Which of the following food-borne pathogens can survive at refrigeration temperature?
- (a) *Staphylococcus aureus*
 - (b) *Listeria monocytogenes*
 - (c) *Salmonella typhimurium*
 - (d) *E. coli*
77. Which one of the following parasites is **not** transmitted through meat in humans?
- (a) *Taenia solium*
 - (b) *Taenia saginata*
 - (c) *Echinococcus granulosus*
 - (d) *Trichinella spiralis*
78. Which among the following is the binding site of organophosphate insecticides?
- (a) Na^+ -ions channel
 - (b) Cl^- -ions channel
 - (c) Esteratic site of AChE
 - (d) Anionic site of AChE
79. Which of the following antibiotics inhibits nucleic acid synthesis?
- (a) Actinomycin
 - (b) Chloramphenicol
 - (c) Erythromycin
 - (d) Tetracycline
80. In cyanide poisoning, the colour of venous blood becomes
- (a) bright cherry red
 - (b) brown
 - (c) chocolate
 - (d) green

81. 'Drug efficacy' refers to
- (a) effectiveness of drug in life-threatening conditions
 - (b) the maximal effect or response produced by the drug
 - (c) the dose of the drug needed to produce half-maximal effect
 - (d) the minimum dose of the drug needed to produce toxic effect
82. Which of the following anti-hypertensive drugs is a mixed adrenergic antagonist?
- (a) Labetalol
 - (b) Methyldopa
 - (c) Guanadrel
 - (d) Atenolol
83. Which of the following is a centrally acting anti-emetic drug?
- (a) Benzocaine
 - (b) Betazole
 - (c) Neostigmine
 - (d) Ondansetron
84. Which one of the following is a systemic antacid?
- (a) Sodium acetate
 - (b) Aluminium hydroxide
 - (c) Magnesium oxide
 - (d) Calcium carbonate
85. Extreme type of outbreeding is observed between
- (a) breeds
 - (b) strains
 - (c) species
 - (d) lines

86. If the environmental variance is low, the heritability would be
- (a) low
 - (b) high
 - (c) zero
 - (d) Not change
87. The frequency of a recessive allele is 0.40 in a large random mating population. What is the frequency of a heterozygote?
- (a) 0.42
 - (b) 0.48
 - (c) 0.60
 - (d) 0.24
88. During which stage of meiosis there is formation of the bivalent dyads?
- (a) Leptotene
 - (b) Zygotene
 - (c) Diplotene
 - (d) Pachytene
89. Chromosome number of river and swamp buffalo is
- (a) 50 and 48 respectively
 - (b) 40 and 38 respectively
 - (c) 60 and 58 respectively
 - (d) 48 and 50 respectively
90. If an animal consumes 5 kg DM and excretes 5 kg faeces with 50% moisture, the digestibility coefficient will be
- (a) 40%
 - (b) 50%
 - (c) 60%
 - (d) 10%

91. Which of the following anti-nutritional substances **does not** affect utilization of protein?
- (a) Protease inhibitor
 - (b) Saponin
 - (c) Oxalic acid
 - (d) Tannin
92. Which of the following vitamins is required during conversion of tryptophan into niacin?
- (a) Thiamine
 - (b) Riboflavin
 - (c) Pyridoxine
 - (d) Biotin
93. Which of the following feed ingredients is **not** a protein supplement?
- (a) Groundnut cake
 - (b) Mustard cake
 - (c) Soyabean meal
 - (d) Maize grain
94. Restricted level of molasses used in ruminants is
- (a) 10% to 15%
 - (b) 5% to 10%
 - (c) 3% to 5%
 - (d) 1% to 2%
95. Time required to remove 90% of the organisms from food commodities is known as
- (a) D-value
 - (b) Z-value
 - (c) F-value
 - (d) thermal death time

96. Casein protein is exclusive to milk and exists in
- (a) colloidal state
 - (b) emulsion state
 - (c) particle state
 - (d) solution state
97. Venison is a meat of
- (a) cattle
 - (b) monkey
 - (c) horse
 - (d) deer
98. The process of tanning sheep skin with fish oil is popularly known as
- (a) shammoying
 - (b) dying
 - (c) bating
 - (d) desliming
99. Nitrite is added in meat to inhibit growth of which of the following organisms?
- (a) *Clostridium perfringens*
 - (b) *Escherichia coli*
 - (c) *Salmonella gallinarum*
 - (d) *Clostridium botulinum*
100. The bright pink colour characteristic of cured meat is due to
- (a) oxymyoglobin
 - (b) deoxymyoglobin
 - (c) nitrosyl haemochromogen
 - (d) myoglobin

101. Recovery of fat from the dead carcasses is called
- (a) rendering
 - (b) simmering
 - (c) braising
 - (d) pasteurization
102. Maximum milk producing country in the world is
- (a) USA
 - (b) Russia
 - (c) Canada
 - (d) India
103. 'Peak yield' in cattle is attained after
- (a) 1-2 weeks after parturition
 - (b) 3-4 weeks after parturition
 - (c) 6-7 weeks after parturition
 - (d) 9-10 weeks after parturition
104. Gestation period of 'ewe' is about
- (a) 140 days
 - (b) 150 days
 - (c) 160 days
 - (d) 170 days
105. For optimization of species specific 'inter-calving period' one of the most efficient management traits is to be manipulated is
- (a) service period
 - (b) gestation period
 - (c) lactation period
 - (d) dry period

106. The long (10–25 cm) lustrous goat fibre with small ringlets is called
- (a) hair
 - (b) wool
 - (c) mohair
 - (d) pashmina
107. Socialization is a process involving
- (a) setting up the social norms
 - (b) training to adopt to society
 - (c) gradual changing of organism
 - (d) declaring everything to society
108. Which of the following is a second tier of Panchayati Raj institution?
- (a) Village Panchayat
 - (b) Block Samiti (Block Panchayat)
 - (c) Zila Panchayat
 - (d) Vidhan Sabha
109. Which of the following is a non-projected visual aid?
- (a) Overhead projector
 - (b) Epidiascope
 - (c) Banner
 - (d) Slide projector
110. Mass media participation is generally more in which type of society?
- (a) Urban
 - (b) Rural
 - (c) Semi-rural
 - (d) Cooperative

111. Which of the following glands has both an endocrine and an exocrine function?
- (a) Mammary
 - (b) Pancreas
 - (c) Pituitary
 - (d) Adrenal
112. Conversion of galactose to glucose occurs to the greatest extent in which one of the following?
- (a) Small intestine
 - (b) Liver
 - (c) Skeletal muscle
 - (d) Brain
113. The most abundant protein in the mammalian organism is
- (a) myosin
 - (b) albumin
 - (c) actin
 - (d) collagen
114. Peptide bonds in proteins join the
- (a) R group of one amino acid with the α -carboxyl group of another
 - (b) α -carboxyl group of one amino acid with the α -amino group of another
 - (c) sulfide group of one amino acid with the amide group of another
 - (d) side chains of two adjacent amino acids
115. Which one of the following is the best known adhesion protein of the extracellular matrix?
- (a) Integrin
 - (b) Elastin
 - (c) Fibronectin
 - (d) Myoglobin

116. Mitochondrial DNA is
- (a) circular double-stranded
 - (b) circular single-stranded
 - (c) linear double-helix
 - (d) linear single-stranded
117. Which of the following will be the best choice to study the plasma membrane?
- (a) RBC
 - (b) Fat cell
 - (c) Neurons
 - (d) Nephrons
118. Blood grouping is an example of
- (a) incomplete dominance
 - (b) codominance
 - (c) recessive character
 - (d) overdominance
119. Colchicine is added in cell cultures because it
- (a) stops the growth of bacteria
 - (b) maintains the temperature of RNA ligase
 - (c) acts as spindle poison
 - (d) helps in nutrition
120. Which of the following proteins **cannot** be digested?
- (a) Elastin
 - (b) Globulin
 - (c) Rennin
 - (d) Histone

- 121.** Hassall's corpuscles are present in
- (a) thyroid
 - (b) parathyroid
 - (c) thymus
 - (d) pancreas
- 122.** The largest cranial nerve is
- (a) vagus
 - (b) trigeminal
 - (c) trochlear
 - (d) facial
- 123.** The ovulation fossa is present in the ovary of
- (a) cow
 - (b) ewe
 - (c) mare
 - (d) sow
- 124.** The serous fold that attaches intestine to dorsal wall of abdomen is known as
- (a) fascia
 - (b) omentum
 - (c) ligament
 - (d) mesentery
- 125.** Heart is extended in the abdomen and lies between lobes of liver in
- (a) horse
 - (b) ox
 - (c) pig
 - (d) fowl

126. The parafollicular cells of thyroid follicle produce
- (a) monoiodotyrosine (MIT)
 - (b) diiodotyrosine (DIT)
 - (c) calcitonin
 - (d) thyroxine
127. Which of the following is **not** a GIT hormone?
- (a) Gastrin
 - (b) Vasoactive intestinal polypeptide (VIP)
 - (c) Gastric inhibitory polypeptide (GIP)
 - (d) Rennin
128. 90% of the blood enters into ventricles from auricles during
- (a) atrial systole
 - (b) atrial diastole
 - (c) ventricular systole
 - (d) ventricular diastole
129. Endocrine cells secreting the gastrin hormone are located in which region of stomach?
- (a) Cardiac
 - (b) Fundus
 - (c) Corpus
 - (d) Pyloric
130. Hair cells are the sensory cells located in
- (a) skin
 - (b) tongue
 - (c) ears
 - (d) eyes

131. Which of the following segments of the nephron is virtually impermeable to water?
- (a) Proximal convoluted tubule
 - (b) Thick segment of ascending loop
 - (c) Thin segment of descending loop
 - (d) Distal convoluted tubule
132. Which of the following is the best test to detect rabies virus in the brain of a dog?
- (a) Agglutination
 - (b) Hemagglutination inhibition
 - (c) Virus neutralization
 - (d) Direct immunofluorescence
133. Cork screw motility is shown by
- (a) *Corynebacterium* spp.
 - (b) *Campylobacter* spp.
 - (c) *Clostridium* spp.
 - (d) *Mycoplasma* spp.
134. Most potent aflatoxin is
- (a) B1
 - (b) B2
 - (c) G1
 - (d) G2
135. Which of the following is an asexual spore?
- (a) Basidiospore
 - (b) Zygosporangium
 - (c) Arthrospore
 - (d) Ascospore

136. Mink encephalopathy is a
- (a) metabolic disease
 - (b) prion disease
 - (c) bacterial disease
 - (d) viral disease
137. Which cell most effectively eliminates transplanted cells?
- (a) Macrophage
 - (b) Neutrophil
 - (c) T lymphocyte
 - (d) Plasma cell
138. Mismatched blood transfusion leads to which of the following types of hypersensitivity?
- (a) Type I
 - (b) Type II
 - (c) Type III
 - (d) Type IV
139. Mucosal immunity is preferentially stimulated if the immunogen is administered
- (a) intravenously
 - (b) intramuscularly
 - (c) intradermally
 - (d) orally
140. Diffuse rapidly spreading suppurative inflammation of subcutaneous tissues is known as
- (a) abscess
 - (b) carbuncle
 - (c) furuncle
 - (d) phlegmon



141. Failure of tissue to receive an adequate supply of oxygen, occurring due to failure of tissue oxidation system is called as
- (a) anoxic anoxia
 - (b) histotoxic anoxia
 - (c) anemic anoxia
 - (d) stagnant anoxia
142. Hypoxic injury of cells in all tissues produces coagulative necrosis, **except** in
- (a) liver
 - (b) pancreas
 - (c) brain
 - (d) lungs
143. Sago spleen is synonym for
- (a) splenic infarct
 - (b) focal splenitis
 - (c) amyloidosis of spleen
 - (d) hemosiderosis of spleen
144. Prussian blue reaction is used to demonstrate
- (a) melanin
 - (b) lead
 - (c) hemosiderin
 - (d) iron
145. Which of the following uroliths is most commonly seen in dogs?
- (a) Magnesium ammonium phosphate
 - (b) Calcium oxalate
 - (c) Urate
 - (d) Silica

146. Cooked rice grain-type of segments in the faeces of sheep indicate the infection of
- (a) *Avitellina centripunctata*
 - (b) *Moniezia expansa*
 - (c) *Stilesia globipunctata*
 - (d) *Thysaniezia giardia*
147. Potassium dichromate is used for
- (a) preservation of helminths
 - (b) sporulation of coccidian oocyst
 - (c) fixation of the tissues
 - (d) sedimentation of eggs
148. The most pathogenic tapeworm of poultry is
- (a) *Davainea proglottina*
 - (b) *Railletina cestticillus*
 - (c) *Cotugnia cuneata*
 - (d) *Amoebotaenia sphenoides*
149. Triangular dorsal spines are the characteristic of
- (a) *Sarcoptes*
 - (b) *Psoroptes*
 - (c) *Demodex*
 - (d) *Cnemidocoptes*
150. Cyst of *Entamoeba coli* is
- (a) binucleated
 - (b) quadrinucleated
 - (c) hexanucleated
 - (d) octanucleated

151. Which of the following domestic animals frequently suffers from hepatic and renal diseases?
- (a) Cattle and horse
 - (b) Horse, sheep and goat
 - (c) Dog and cat
 - (d) Dog and horse
152. The fluid of choice in acute gastritis in dogs is
- (a) 1.1% potassium chloride solution
 - (b) dextrose normal saline
 - (c) 1.3% sodium bicarbonate solution
 - (d) Ringer's lactated solution
153. The normal pH of rumen liquor is
- (a) 6.5 to 8.5
 - (b) 4.5 to 5.0
 - (c) 6.0 to 7.0
 - (d) 2.0 to 3.0
154. Lyme disease is due to
- (a) *Borrelia burgdorferi*
 - (b) *Bacillus piliformis*
 - (c) *Citrobacter freundii*
 - (d) *Borrelia anserine*
155. Bleeding from nose is called
- (a) haemoptysis
 - (b) epistaxis
 - (c) haematemesis
 - (d) apoplexy

156. Casoni's test is done for
- (a) fascioliasis
 - (b) echinococcosis
 - (c) ascariasis
 - (d) babesiosis
157. A dog has been diagnosed as a case of glaucoma. It indicates that the dog has
- (a) increased intracranial pressure
 - (b) increased intra-abdominal pressure
 - (c) increased intraocular pressure
 - (d) increased intra-synovial pressure
158. Intramedullary pinning is the technique of choice for fixation of transverse fracture of
- (a) femur
 - (b) fibula
 - (c) tibiotarsal bone
 - (d) radiocarpal bone
159. Nerve block used to desensitize horn is
- (a) Peterson block
 - (b) auriculopalpebral block
 - (c) cornual block
 - (d) frontal block
160. Fracture in which the fracture site communicates with the exterior is called
- (a) simple fracture
 - (b) compound fracture
 - (c) complex fracture
 - (d) composite fracture

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