

# **OPSC VAS**

**Previous Year Paper  
(Animal Science)**

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# Test Prime

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**TEST BOOKLET**  
**VETERINARY ASSISTANT SURGEON**  
**PAPER—II**  
**( Animal Science )**

Sl. No. **2105**

Time Allowed : 2½ Hours

Maximum Marks : 400

**: INSTRUCTIONS TO CANDIDATES :**

1. IMMEDIATELY AFTER THE COMMENCEMENT OF THE EXAMINATION, YOU SHOULD CHECK THAT THIS TEST BOOKLET **DOES NOT** HAVE ANY UNPRINTED OR TORN OR MISSING PAGES OR ITEMS ETC. IF SO, GET IT REPLACED BY A COMPLETE TEST BOOKLET OF THE SAME SERIES ISSUED TO YOU.
2. ENCODE CLEARLY THE TEST BOOKLET SERIES **A, B, C** OR **D**, AS THE CASE MAY BE, IN THE APPROPRIATE PLACE IN THE ANSWER SHEET USING BALL POINT PEN (BLUE OR BLACK).
3. You have to enter your **Roll No.** on the Test Booklet in the Box provided alongside. **DO NOT** write *anything else* on the Test Booklet.
4. **YOU ARE REQUIRED TO FILL UP & DARKEN ROLL NO., TEST BOOKLET / QUESTION BOOKLET SERIES IN THE ANSWER SHEET AS WELL AS FILL UP TEST BOOKLET / QUESTION BOOKLET SERIES AND SERIAL NO. AND ANSWER SHEET SERIAL NO. IN THE ATTENDANCE SHEET CAREFULLY. WRONGLY FILLED UP ANSWER SHEETS ARE LIABLE FOR REJECTION AT THE RISK OF THE CANDIDATE.**
5. This Test Booklet contains **200** items (questions). Each item (question) comprises of four responses (answers). You have to select the correct response (answer) which you want to mark (darken) on the Answer Sheet. In case, you feel that there is more than one correct response (answer), you should mark (darken) the response (answer) which you consider the best. In any case, choose **ONLY ONE** response (answer) for each item (question).
6. You have to mark (darken) all your responses (answers) **ONLY** on the **separate Answer Sheet** provided by using **BALL POINT PEN (BLUE OR BLACK)**. See instructions in the Answer Sheet.
7. All items (questions) carry equal marks. All items (questions) are compulsory. Your total marks will depend only on the number of correct responses (answers) marked by you in the Answer Sheet.
8. Before you proceed to mark (darken) in the Answer Sheet the responses (answers) to various items (questions) in the Test Booklet, you have to fill in some particulars in the Answer Sheet as per the instructions sent to you with your **Admission Certificate**.
9. After you have completed filling in all your responses (answers) on the Answer Sheet and after conclusion of the examination, you should hand over to the Invigilator the *Answer Sheet* issued to you. You are allowed to take with you the candidate's copy / second page of the Answer Sheet along with the **Test Booklet**, after completion of the examination, for your reference.
10. Sheets for rough work are appended in the Test Booklet at the end.

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SEAL



1. The most abundant immunoglobulin of normal animals is
  - (A) IgG
  - (B) IgM
  - (C) IgD
  - (D) IgE
2. The hormone, that is produced from the kidney, is
  - (A) ADH
  - (B) aldosterone
  - (C) erythropoietin
  - (D) ANP
3. Uric acid is precipitated in the avian renal tubules in order to
  - (A) avoid ammonia toxicity
  - (B) reduce water excretion
  - (C) have a better mix with faeces
  - (D) lubricate the renal tubules
4. The process by which mechanical reduction of food, that takes place in the mouth, is called
  - (A) deglutition
  - (B) mastication
  - (C) digestion
  - (D) salivation
5. The myosin cross bridge heads disassociate from the active sites of actin when the cross bridge heads binds with
  - (A)  $\text{Ca}^{2+}$
  - (B)  $\text{ADP} + \text{Pi}$
  - (C) tropomyosin
  - (D) ATP
6. Inhibitory interneuron Renshaw cells are concerned with
  - (A) presynaptic inhibition
  - (B) recurrent inhibition
  - (C) direct inhibition
  - (D) reciprocal inhibition
7. The hormones secreted by a group of cells, which have actions on nearby cells, are known as
  - (A) endocrines
  - (B) autocrines
  - (C) paracrines
  - (D) neurocrines
8. Aldosterone hormone is having receptors on
  - (A) proximal convoluted tubule
  - (B) distal convoluted tubule
  - (C) collecting duct
  - (D) None of the above
9. Hormone essential for milk let down is
  - (A) oxytocin
  - (B) prolactin
  - (C) placental lactogen
  - (D) thyroxine
10. A placental hormone is
  - (A) TSH
  - (B) hCG
  - (C) FSH
  - (D) LH



11. Parturient hypocalcemia is seen in all mammals, especially
  - (A) ewes
  - (B) mares
  - (C) cows
  - (D) queens
12. Basophils and mast cells have receptors for
  - (A) IgG
  - (B) IgM
  - (C) IgD
  - (D) IgE
13. The site of formation of CSF is
  - (A) choroid plexus
  - (B) astrocytes
  - (C) sinuses
  - (D) ventricles
14. The type of placentation seen in bitch is
  - (A) epitheliochorial
  - (B) syndesmochorial
  - (C) hemochorial
  - (D) endotheliochorial
15. The number of air sacs in birds is
  - (A) 5
  - (B) 7
  - (C) 9
  - (D) 10
16. Bulbourethral gland is absent in
  - (A) dogs
  - (B) boars
  - (C) rams
  - (D) bulls
17. Metestrous bleeding in cow is due to
  - (A) estrogen withdrawal
  - (B) progesterone withdrawal
  - (C) sudden increase in progesterone
  - (D) sudden increase in estrogen
18. Countercurrent mechanism of the kidney involves
  - (A) proximal tubule and collecting tubule
  - (B) loop of Henle and vasa recta
  - (C) proximal tubule and loop of Henle
  - (D) collecting duct
19. Which of the following spirometric terms best represents the maximum amount of air that can be inspired after a normal, quiet respiration?
  - (A) Inspiratory capacity
  - (B) Functional residual capacity
  - (C) Inspiratory reserve volume
  - (D) Vital capacity
20. Capacitation of spermatozoa occurs in
  - (A) seminal vesicles
  - (B) Sertoli cells
  - (C) epididymis
  - (D) uterus of female after ejaculation

21. Androgens in the testes are produced by  
(A) Sertoli cells  
(B) Leydig cells  
(C) spermatogonia  
(D) seminiferous tubules
22. Rumination centre is located in  
(A) pons  
(B) hypothalamus  
(C) medulla  
(D) cerebellum
23. The pigs depend on \_\_\_\_\_ for evaporative heat loss.  
(A) panting  
(B) sweating  
(C) wallowing  
(D) saliva spreading
24. Circadian rhythms are those with a period of approximately  
(A) 12 hours  
(B) 24 hours  
(C) 36 hours  
(D) 48 hours
25. The rods contain a visual pigment called  
(A) rhodopsin  
(B) melanin  
(C) hemocyanin  
(D) carotene
26. The trigeminal pathways transmit information on  
(A) joint proprioception  
(B) tooth pain  
(C) touch and pressure sensation from part of face  
(D) All of the above
27. In the adult animal, plasma contains  
(A) 91-92 % water and 8-9% solids  
(B) 80-81% water and 19-20% solids  
(C) 94-95% water and 5-6% solids  
(D) 88-89% water and 11-12% solids
28. The receptor type that detects body position in relation to environment is  
(A) tactile receptor  
(B) proprioceptors  
(C) nociceptors  
(D) thermoreceptors
29. The amino acid sequence of a protein refers to the  
(A) tertiary structure  
(B) primary structure  
(C) secondary structure  
(D) quaternary structure
30. The molecule often termed as the lipotropic factor is  
(A) cysteine  
(B) glutathione  
(C) choline  
(D) thymine



31. Conjugation of bilirubin with glucuronic acid occurs in  
(A) liver  
(B) kidney  
(C) intestine  
(D) muscle
32. An example of bifunctional enzyme is  
(A) phosphofructokinase-1  
(B) phosphofructokinase-2  
(C) phosphoglucomutase  
(D) triose mutase
33. The glycolytic enzyme that can be inhibited by fluoride is  
(A) aldolase  
(B) PFK-1  
(C) glucokinase  
(D) enolase
34. Heparin is a  
(A) nucleic acid  
(B) proteoglycan  
(C) lipid  
(D) heteropolysaccharide
35. Nucleotides are joined by which one of the following to form nucleic acids?  
(A) Peptide bond  
(B) Phosphodiester bond  
(C) Hydrogen bond  
(D) Glycosidic bond
36. DNA absorbs maximum UV light at a wavelength of  
(A) 200 nm  
(B) 360 nm  
(C) 220 nm  
(D) 260 nm
37. Source(s) of nitrogen in urea cycle is/are  
(A) aspartate and ammonia  
(B) glutamate and ammonia  
(C) uric acid  
(D) adenine
38. The hormones produced by the alpha cells of Islets of Langerhans is  
(A) somatostatin  
(B) insulin  
(C) glucagon  
(D) None of the above
39. The coenzyme required for the activity of transaminases is  
(A) PLP  
(B) TPP  
(C) CoA-SH  
(D) FAD
40. The amino acid in a protein sequence is usually written from  
(A) COOH to NH<sub>2</sub> terminal  
(B) NH<sub>2</sub> to COOH terminal  
(C) 5' to 3' end  
(D) 3' to 5' end

41. Which one of the following is **not** a ketone body?
- (A) Acetone  
(B) Oxaloacetate  
(C) Acetoacetate  
(D) Beta-hydroxybutyrate
42. The number of carbon atoms present in stearic acid is
- (A) 16  
(B) 18  
(C) 8  
(D) 10
43. Ruhemann's purple is produced by the reactions of proteins with
- (A) FDNB  
(B)  $\text{HNO}_3$   
(C) ninhydrin  
(D) None of the above
44. Glycolysis under anaerobic condition results in the formation of
- (A) pyruvate  
(B) lactate  
(C) ethanol  
(D)  $\text{CO}_2$
45. Detoxification of a compound involves
- (A) oxidation and reduction  
(B) hydroxylation and conjugation  
(C) Both (A) and (B)  
(D) None of the above
46. Plasma proteins can be separated into
- (A) albumin  
(B) globulin  
(C) fibrinogen  
(D) All of the above
47. The most common plasmid vector used in genetic engineering is
- (A) pBR 328  
(B) pBR 322  
(C) pBR 325  
(D) pBR 330
48. The only organ that can dispose significant quantities of cholesterol primarily in the form of bile salts is
- (A) skeletal muscle  
(B) kidney  
(C) liver  
(D) adipose tissue
49. The type of ketone body excreted through breath is
- (A) acetone  
(B) acetoacetate  
(C) beta-hydroxybutyrate  
(D) None of the above
50. Decreased sodium levels in the blood is known as
- (A) hypernatremia  
(B) hyponatremia  
(C) hyperkalemia  
(D) hypokalemia



51. A compound foreign to body is  
(A) probiotic  
(B) antibiotic  
(C) xenobiotic  
(D) symbiotic
52. IMP is a precursor for  
(A) purines  
(B) pyrimidines  
(C) ribose  
(D) Both (A) and (B)
53. The class of restriction endonucleases that cut DNA at recognition sites is  
(A) type I  
(B) type II  
(C) type III  
(D) None of the above
54. The process of producing similar populations of genetically identical individuals asexually is called  
(A) transgenesis  
(B) cloning  
(C) stem cells  
(D) superovulation
55. In a competitive inhibition,  
(A)  $K_m$  increases  
(B)  $K_m$  decreases  
(C)  $V_{max}$  decreases  
(D)  $V_{max}$  increases
56. The inactive form of enzyme is known as  
(A) holoenzyme  
(B) isoenzyme  
(C) apoenzyme  
(D) zymogen
57. Campaign is an example of \_\_\_\_\_ contact method.  
(A) individual  
(B) mass  
(C) group  
(D) None of the above
58. The one, who assembles and synthesizes information and introduces new combination of factors of production, is  
(A) a drone  
(B) an innovator  
(C) a Fabian  
(D) an imitator
59. Tendency of the people to feel that their culture is the best is called  
(A) Ethnocentrism  
(B) Egoism  
(C) Superiors  
(D) Altruism
60. The method of finding the present value of future income is  
(A) compounding  
(B) discounting  
(C) amortization  
(D) payback value

- 61.** Extension education is  
(A) informal education  
(B) formal education  
(C) non-formal education  
(D) adult education
- 62.** The region most conducive to effective interpersonal relationship and communication is termed as  
(A) arena  
(B) facade  
(C) blind spot  
(D) unknown
- 63.** The expansion of PPP is  
(A) Public Performance Partnership  
(B) Private Partnership Programme  
(C) People Participation Programme  
(D) Public Private Partnership
- 64.** The agency that formulates standards for exporting raw and processed livestock products to foreign countries is  
(A) APEDA  
(B) APMA  
(C) APCD  
(D) APDC
- 65.** Panchayati Raj resulted from the recommendation of the Committee headed by  
(A) Dube  
(B) K. C. Pant  
(C) Kothari  
(D) Balwant Rai Mehta
- 66.** Sorting of products into various standard categories is known as  
(A) standardization  
(B) dispersion  
(C) grading  
(D) differentiation
- 67.** Welfare definition of economics was stated by  
(A) Adam Smith  
(B) Alfred Marshall  
(C) Lionel Robbins  
(D) Samuelson
- 68.** The reward paid to capital is  
(A) profit  
(B) wages  
(C) rent  
(D) interest
- 69.** A small group of rural poor, which voluntarily comes forward to form a group for improvement of social and economic status of the members, is  
(A) self-help group  
(B) Gemeinschaft  
(C) ethnic  
(D) friends club
- 70.** Which one is an example of variable input in a dairy farm?  
(A) Farm family labour  
(B) Casual hired labour  
(C) Farm manager's labour  
(D) Permanently hired labour



71. Total current assets/total current liabilities are known as  
(A) current ratio  
(B) quick ratio  
(C) current liability ratio  
(D) working ratio
72. In an effective learning situation, \_\_\_\_\_ occupy the most important central position.  
(A) teachers  
(B) learners  
(C) subject matter  
(D) teaching materials
73. The process of creation of utilities and values is called  
(A) consumption  
(B) production  
(C) distribution  
(D) exchange
74. Withdrawal of cash from business by the proprietor should be debited in  
(A) drawings account  
(B) capital account  
(C) cash account  
(D) bank account
75. The assets that are used up in the production process over a long period and cannot be easily converted into cash are called  
(A) current assets  
(B) medium term assets  
(C) deferred liabilities  
(D) fixed assets
76. In extension communication, the \_\_\_\_\_ of the communicator is important for effective communication.  
(A) availability  
(B) credibility  
(C) approachability  
(D) simplicity
77. An idea that an individual adopts at one point of time in order to lower the probability that some future unwanted event will occur is called  
(A) preventive innovation  
(B) progressive innovation  
(C) probability innovation  
(D) productive innovation
78. The ability to influence a group towards the achievement of a vision or set of goals is called  
(A) management  
(B) organization  
(C) control  
(D) leadership
79. Use of computer communication and digital interactive multimedia to facilitate dissemination of farm information is known as  
(A) e-commerce  
(B) e-learning  
(C) cyber extension  
(D) expert communication
80. Application of commercialization strategies to the diffusion of non-profit products and services is known as  
(A) non-profit marketing  
(B) service marketing  
(C) effective marketing  
(D) social marketing

81. Supply curve is  
(A) upward sloping curve  
(B) horizontal line  
(C) downward sloping curve  
(D) vertical line
82. The unique feature of KVK is  
(A) organizing OFT  
(B) refining technologies  
(C) conducting training  
(D) non-uniform syllabus
83. Family is an example of  
(A) primary group  
(B) secondary group  
(C) formal group  
(D) voluntary group
84. The coefficient of elasticity of inelastic demand is  
(A) infinite  
(B) less than one  
(C) equal to one  
(D) zero
85. Colostrum feeding must be started within first few hours of birth as to  
(A) increase protein digestibility  
(B) facilitate peristalsis  
(C) elevate absorption of trace minerals  
(D) enhance absorption of antibodies
86. Urea treatment of paddy straw to improve its nutritive value is called  
(A) physical treatment  
(B) biological treatment  
(C) chemical treatment  
(D) biochemical treatment
87. For feeding of mature sheep, DCP to TDN ratio is about  
(A) 1 : 10  
(B) 10 : 1  
(C) 1 : 5  
(D) 5 : 1
88. The crude fibre percent (maximum) of pig finishing/breeding meal as per BIS is  
(A) 2% of diet  
(B) 3% of diet  
(C) 4% of diet  
(D) 8% of diet
89. In poultry, the glandular or the true stomach is  
(A) gizzard  
(B) proventriculus  
(C) duodenum  
(D) crop
90. The maximum level of salt incorporation in poultry diet is  
(A) 0.5% of the diet  
(B) 2% of the diet  
(C) 3% of the diet  
(D) 4% of the diet



91. The CP content of broiler pre-starter ration is  
(A) 10%  
(B) 15%  
(C) 18%  
(D) 23%
92. The most limiting amino acids in poultry diets are  
(A) arginine and valine  
(B) lysine and methionine  
(C) histidine and threonine  
(D) tyrosine and tryptophan
93. Factors affecting TDN value of feedstuffs include  
(A) digestibility of nutrients  
(B) ether extract content  
(C) NDF and ADF levels  
(D) All of the above
94. The oil meal/cake that contains more crude protein is  
(A) groundnut cake  
(B) cottonseed meal  
(C) sunflower meal  
(D) mustard oil cake
95. In ruminants, the ME is calculated from DE by multiplying  
(A) 0.99  
(B) 0.75  
(C) 0.65  
(D) 0.82
96. Enlarged tibiotarsal joints is caused by the deficiency of  
(A) vitamin K  
(B) vitamin E  
(C) vitamin C  
(D) niacin
97. In general, the dry matter content of green legume forage crops is  
(A) 15–25%  
(B) 50–60%  
(C) 80–95%  
(D) less than 5%
98. The commonly used phosphorus source in commercial feed mills is  
(A) calcite  
(B) shell grit  
(C) limestone powder  
(D) dicalcium phosphate
99. In ruminants, heat increment is due to  
(A) heat of fermentation  
(B) heat of nutrient metabolism  
(C) Both (A) and (B)  
(D) excess microbes in the rumen
100. Mature plants are a poor source of  
(A) crude fibre  
(B) protein  
(C) total ash  
(D) lignin

101. Hammer Mill is used for
- mixing
  - pelleting
  - drying
  - grinding
102. Pasture digestibility is estimated by
- conventional method
  - direct method
  - indicator method
  - difference method
103. Grass tetany occurs due to the deficiency of
- magnesium
  - calcium
  - phosphorus
  - copper
104. Nutritional peculiarity of guinea pigs is due to
- higher requirement of vitamin C
  - higher deactivation of vitamin C
  - inefficiency of vitamin C synthesis
  - inefficiency of vitamin C absorption
105. Calcium content (%) of shell grit is
- 26–28
  - 10–12
  - 30–32
  - 36–38
106. Parakeratosis in swine is due to
- copper toxicity
  - zinc deficiency
  - phosphorus deficiency
  - iodine toxicity
107. A non-legume fodder is
- stylo
  - sesbania* sp.
  - bajra
  - lucerne
108. A coccidiostat is
- probiotic
  - organic acid
  - salinomycin
  - antibiotic
109. The instrument used to determine the gross energy value of feeds is
- bomb calorimeter
  - respiration calorimeter
  - heat detection apparatus
  - thermometer
110. The synthetic feed additive, that prevents the rancidity of fats, is
- butylated hydroxytoluene
  - phytase
  - vitamin A
  - monensin



111. Parrot beak condition in chick embryos is caused due to the deficiency of  
(A) folic acid  
(B) biotin  
(C) niacin  
(D) vitamin B<sub>12</sub>
112. As per BIS standards, recommended calcium content in phase I layer mash is  
(A) 3.5%  
(B) 3.0%  
(C) 1%  
(D) 7.5%
113. When meat is frozen slowly, the largest crystals are formed  
(A) inside muscle fibre  
(B) between muscles  
(C) outside muscle fibre  
(D) between epimysium and perimysium
114. The ultimate pH of meat protein is  
(A) 5.6  
(B) 4.5  
(C) 7.0  
(D) 4.0
115. The pH of normal fresh buffalo milk is  
(A) 6.4–6.6  
(B) 6.7–6.8  
(C) 6.9–7.0  
(D) 5.4–5.6
116. The kneading of butter refers to  
(A) curing  
(B) pooling  
(C) churning  
(D) working
117. The sweet which can be made by using both Khoa and Chhana is  
(A) Rasamalai  
(B) Rasogolla  
(C) Sandesh  
(D) Pantooa
118. The temperature and time combination in stassanization is  
(A) 74 °C for 10 seconds  
(B) 74 °C for 30 seconds  
(C) 74 °C for 7 seconds  
(D) 74 °C for 55 seconds
119. The type of clarifier, used between storage tank and pasteurizer in dairy plant, is  
(A) warm  
(B) cold  
(C) semi-warm  
(D) semi-cool
120. Adulteration of Ghee with Vanaspati can be detected by  
(A) crystallization test  
(B) opacity test  
(C) Baudouin test  
(D) tocopherol test

- 121.** Active concentration of chlorine solution used for sanitization in dairies is (in ppm)
- (A) 650–750  
(B) 150–200  
(C) 50–150  
(D) 500–600
- 122.** The secretion from the sebaceous glands of sheep is
- (A) scales  
(B) styles  
(C) lanolin  
(D) loom
- 123.** Isolation block of a slaughter house is also called
- (A) miniature abattoir  
(B) stunning room  
(C) chilling room  
(D) ETP
- 124.** The protein content of properly dried blood meal is in the range of
- (A) 60%–70%  
(B) 80%–90%  
(C) 65%–75%  
(D) 75%–85%
- 125.** In tanning, wringing is done to remove
- (A) hair  
(B) skin layer  
(C) moisture  
(D) hide faults
- 126.** According to PFA, the percent of fat and percent of SNF in double toned milk should be
- (A) 1.5% and 9.0%  
(B) 4.5% and 8.5%  
(C) 3.0% and 8.5%  
(D) 0.5% and 8.7%
- 127.** As per BIS, the percent of total solids in ice cream should be
- (A) 34  
(B) 36  
(C) 38  
(D) 32
- 128.** According to PFA standards, cream should contain not less than
- (A) 20% milk fat  
(B) 25% milk fat  
(C) 30% milk fat  
(D) 15% milk fat
- 129.** The natural colour added to butter is
- (A) annatto  
(B) diacetyl  
(C) anthocyanins  
(D) lycopenes
- 130.** Greenish yellow colour of whey is due to
- (A) carotene  
(B) xanthophylls  
(C) riboflavin  
(D) None of the above



131. Scalding temperature in pigs is

- (A) 57–60 °C
- (B) 61–64 °C
- (C) 65–68 °C
- (D) 66–70 °C

132. The lymph node, also known as inspector's node, is

- (A) submaxillary lymph node
- (B) prepectoral lymph node
- (C) posterior mediastinal lymph node
- (D) bronchial lymph node

133. Shipping fever is caused by

- (A) *Salmonella typhimurium*
- (B) *Treponema hyodysenteriae*
- (C) *Pasteurella haemolytica*
- (D) *Moraxella bovis*

134. The bright red colour in freshly cut meat is called

- (A) bloom
- (B) glow
- (C) radiance
- (D) florescence

135. The tenderizing enzyme prepared from papaya is

- (A) bromelin
- (B) papain
- (C) amylase
- (D) ficin

136. The deposition of fat between the muscle fibres is known as

- (A) dotting
- (B) flushing
- (C) marbling
- (D) mottling

137. HACCP system of quality assurance involves \_\_\_\_\_ numbers of principles.

- (A) 7
- (B) 6
- (C) 5
- (D) 8

138. Skin obtained from fully grown large animals is called

- (A) lather
- (B) leather
- (C) tan
- (D) hide

139. Offals meant for meat trade should be chilled below a temperature (°C) of

- (A) 5 °C
- (B) 4 °C
- (C) 3 °C
- (D) 7 °C

140. In curing of meat, the ingredient(s) added for stabilization of colour is/are

- (A) salt
- (B) nitrite and nitrate
- (C) corn syrup
- (D) phosphates

141. A group of sheep is called  
(A) herd  
(B) flock  
(C) drove  
(D) pack
142. Ideal moisture content in hay for storage should not be more than  
(A) 10–15 percent  
(B) 25–30 percent  
(C) 5–8 percent  
(D) 20–23 percent
143. The ideal crop for silage making is  
(A) maize  
(B) red clover  
(C) lucerne  
(D) oats
144. For proper rumen fermentation, the density  $\times$  digestibility value of the total feed should be around  
(A) 30  
(B) 25  
(C) 35  
(D) 60
145. Creep feeding of young piglets should contain  
(A) 22% crude protein  
(B) 12% crude protein  
(C) 16% crude protein  
(D) 15% crude protein
146. The smallest piglet in a litter, usually the last to be farrowed, is called  
(A) foal  
(B) calf  
(C) runt  
(D) None of the above
147. The gestation period in mouse (*Mus musculus*) is  
(A) 15–17 days  
(B) 28–30 days  
(C) 19–21 days  
(D) 45–50 days
148. The condition where estrous cycles become longer and longer and eventually stop, when mice are housed in larger groups, is called  
(A) the Bruce effect  
(B) the Whitten effect  
(C) the Lee-Boot effect  
(D) the Bruce Lee effect
149. The marketing of egg and poultry meat in our country is handled by  
(A) National Egg Coordination Committee  
(B) Central Food Technological Research Institute  
(C) Central Poultry Training Institute for Poultry Production and Management  
(D) National Agricultural Cooperative Marketing Federation of India
150. The small muscular structure hanging from the base of beak in turkeys is called  
(A) snout  
(B) snood  
(C) stoop  
(D) snoop



- 151.** The process of removal of comb and wattles at day-old age is called
- (A) dubbing  
(B) dipping  
(C) dribbling  
(D) docking
- 152.** A surgically castrated male bird under 10 months of age is called
- (A) stag  
(B) capon  
(C) cockerel  
(D) tom
- 153.** Leghorn breed of chickens belong to
- (A) American class  
(B) English class  
(C) Mediterranean class  
(D) Asiatic class
- 154.** The fawn, white and pencilled are the three standard varieties in
- (A) Indian runners  
(B) Khaki Campbells  
(C) Aylesburys  
(D) Rouens
- 155.** Under deep litter system of rearing for natural mating, the male female ratio in layer breeders is
- (A) 1 : 10  
(B) 1 : 12  
(C) 1 : 5  
(D) 1 : 8
- 156.** Covering is the term used to describe the mating in
- (A) sheep  
(B) goat  
(C) pig  
(D) horse
- 157.** In organic animal husbandry, records are mandated to be maintained for
- (A) 5 years  
(B) 2 years  
(C) 3 years  
(D) 7 years
- 158.** In ageing of horse, Galvayne's groove extends all the way down the tooth by
- (A) 15 years  
(B) 20 years  
(C) 25 years  
(D) 30 years
- 159.** Breed of buffalo with peculiar wall eyes is called
- (A) Nili-Ravi  
(B) Toda  
(C) Surti  
(D) Murrah
- 160.** The tallest sheep breed in India is
- (A) Trichy black  
(B) Nellore  
(C) Nilgiri  
(D) Mandya

161. Pelt producing exotic sheep breed is

- (A) Cheviot
- (B) Dorset
- (C) Merino
- (D) Karakul

162. The fleece Mohair is from \_\_\_\_\_ goat breed.

- (A) Alpine
- (B) Boer
- (C) Angora
- (D) Toggenburg

163. The floor space area requirement (in  $m^2$ ) per animal for cows in covered area is

- (A) 3.5
- (B) 4.0
- (C) 2.0
- (D) 12.0

164. Which class of poultry has characteristics of feathered shanks?

- (A) American class
- (B) English class
- (C) Mediterranean class
- (D) Asiatic class

165. A disease caused by fungi is

- (A) Marek's disease
- (B) Coccidiosis
- (C) Mycotoxicosis
- (D) Salmonellosis

166. The part of teeth that appears outside the gum is

- (A) alveolus
- (B) crown
- (C) fang
- (D) neck

167. The zoological name for Japanese quails is

- (A) *Coturnix coturnix japonica*
- (B) *Meleagris gallopavo*
- (C) *Anas platyrhynchos*
- (D) *Gallus gallus domesticus*

168. The young of a guinea fowl is called

- (A) chick
- (B) poult
- (C) keet
- (D) squab

169. The phenomenon, when the crossover event in one region of the chromosome inhibits a second event in nearby regions, is called

- (A) interference
- (B) inference
- (C) inhibition
- (D) co-efficient of coincidence

170. The term allopolyploidy in chromosomal aberrations indicates

- (A) multiples of the same genome
- (B) multiples of  $n$
- (C)  $2n \pm x$
- (D) multiples of different genomes



171. Short chains consisting of approximately 20 nucleotides linked together are called  
(A) polynucleotides  
(B) nucleoids  
(C) oligonucleotides  
(D) nucleins
172. The mutagenic agents that intercalate between purines and pyrimidines of intact DNA and cause deletions and insertions are called  
(A) alkylating agents  
(B) acridine dyes  
(C) base analogs  
(D) UV rays
173. A cross made by mating individuals from two different parent strains, each of which exhibits one of the two contrasting forms of a character, is known as  
(A) criss-crossing  
(B) crossing over  
(C) monohybrid cross  
(D) two-way cross
174. Milk yield is an example of  
(A) sex-linked inheritance  
(B) sex influenced inheritance  
(C) sex limited inheritance  
(D) sex chromosomes
175. The diploid chromosome numbers in cattle (*Bos indicus*, *Bos taurus*) is  
(A) 48  
(B) 54  
(C) 58  
(D) 60
176. Assuming a population to be in Hardy-Weinberg equilibrium, when the gene frequency of a recessive allele is 0.4, the genotype frequency of the heterozygote is  
(A) 0.36  
(B) 0.2  
(C) 0.48  
(D) 0.16
177. Assuming that resemblance due to environment or dominance is negligible, what would be the heritability estimate if the correlation of full sibs = 0.24?  
(A) 0.48  
(B) 0.64  
(C) 0.12  
(D) 0.18
178. The genetic correlation between two metric traits is due to  
(A) epistasis and linkage  
(B) linkage and genetic recombination  
(C) multiple alleles and pleiotropy  
(D) pleiotropy and linkage
179. The superiority or inferiority of those selected for parents as compared to the average of the population from which the breeding animals were selected is called  
(A) selection index  
(B) selection differential  
(C) selection plateau  
(D) artificial selection
180. The inbreeding co-efficient of an individual born of sire and daughter mating, provided the sire is **not** inbred, is  
(A) 0.25  
(B) 0.125  
(C) 0.5  
(D) 0.625

181. The coefficient of relationship between half-sibs is  
(A) 0.50  
(B) 0.25  
(C) 0.125  
(D) 0.375
182. The record of an individual's ancestors related to it through its parents is called  
(A) progeny  
(B) posterity  
(C) pedigree  
(D) offspring
183. The selection index based on combining information of records of the individual and its family members for improving egg production in poultry is called  
(A) Gifford index  
(B) Abplanalp index  
(C) Sundaesan index  
(D) Osborne index
184. The number of registered cattle breeds in India are  
(A) 43  
(B) 30  
(C) 50  
(D) 27
185. Individual selection **cannot** be done for  
(A) body weight  
(B) milk yield  
(C) birth weight  
(D) dressing percentage
186. The major milk breeds of Indian cattle are  
(A) Sahiwal, Gir, Hariana and Ongole  
(B) Sahiwal, Gir, Red Sindhi and Tharparkar  
(C) Red Sindhi, Tharparkar, Siri and Ponwar  
(D) Nagori, Bachaur, Mewati and Kherigarh
187. A newly registered buffalo breed is  
(A) Murrah  
(B) Surti  
(C) Toda  
(D) Manda
188. Sheep breeds famous for prolificacy are  
(A) Kendrapada and Garole  
(B) Changthangi and Chokla  
(C) Gurez and Hassan  
(D) Madras Red and Magra
189. Home tract of Ganjam breed of goat is  
(A) Tamil Nadu  
(B) Kerala  
(C) Himachal Pradesh  
(D) Odisha
190. Individuals born in the same period, season and herd are called  
(A) contemporaries  
(B) counterparts  
(C) collateral relatives  
(D) conjugates



191. The total milk yield given by lactation animals divided by their number in the herd gives
- lactation milk yield
  - peak yield
  - wet average
  - herd average
192. The exotic breed of swine mostly used for the improvement of local stock in India is
- Landrace
  - Large White Yorkshire
  - Duroc
  - Berkshire
193. The Indian breed of buffalo having high milk fat percent is
- Murrah
  - Surti
  - Bhadawari
  - Nili-Ravi
194. Example of a morphological trait is
- egg production in poultry
  - wool production in sheep
  - plumage in birds
  - litter size in pigs
195. To get standard lactation yield in cattle, the correction is required for
- mature lactation yield
  - 305 days
  - twice milking with 4% fat
  - All of the above
196. The process of removal of poor/inferior animals from the herd is
- selection
  - culling
  - mating
  - replacement
197. Interaction of genes that are **not** alleles is known as
- dominance
  - recessive
  - penetrance
  - epistasis
198. In dairy cattle breeding, the level of exotic inheritance is maintained by
- Inter se* mating
  - criss-crossing
  - inbreeding
  - None of the above
199. Progeny testing is done to select the
- progeny
  - parent
  - sibs
  - collateral relatives
200. Crossbreeding is done to
- introduce desirable characters
  - evolve a new breed
  - exploit heterosis
  - All of the above

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**ODISHA PUBLIC SERVICE COMMISSION  
CUTTACK**


**NOTICE**

No...6038.../C-I/PSC, Dt...29.../04/2024

In pursuance of OPSC Notice No-8127/PSC, Dt. 17/10/2023, the Commission invites objections/suggestions from candidates only on the Answer Keys annexed herewith and erroneous questions, if any, relating to the objective type question paper i.e. PAPER-I & PAPER-II for recruitment to the post of Veterinary Assistant Surgeon/Additional Veterinary Assistant Surgeon, pursuant to Advt.No.24 of 2023-24 held on 28/04/2024.

The candidates are also informed to submit their objections as per the proforma enclosed vide annexure-A along with a proof of identity within seven days from the date of display of this notice. Any claims received after seven days will not be entertained.

By order of the Commission

  
Secretary 29/4/24

ANNEXURE-“A”

Format regarding submission of observations/comments against the questions and the relevant answer keys for recruitment to the post of Veterinary Assistant Surgeon/Additional Veterinary Assistant Surgeon, pursuant to Advt.No.24 of 2023-24.

Sl No.	Roll No. of the candidate	Series of Question Booklet Received	PAPER	Appeared Question No. relevant to Booklet Series-A	Suggested Answer Key	Observation and comments	Remarks/co ments
1	2	3		4	5	6	7





**WRITTEN EXAMINATION FOR RECRUITMENT TO THE POST OF VETERINARY  
ASSISTANT SURGEON, PURSUANT TO ADVT. NO.24 OF 2023-24 (HELD ON 28.04.2024).  
DISTRIBUTION OF QUESTIONS IN DIFFERENT SERIES WITH ANSWER IN PAPER-II**

A	B	C	D	Answer
1	51	101	151	A ✓
2	52	102	152	C ✓
3	53	103	153	B ✓
4	54	104	154	B ✓
5	55	105	155	D ✓
6	56	106	156	B ✓
7	57	107	157	C ✓
8	58	108	158	C ✓
9	59	109	159	A ✓
10	60	110	160	B ✓
11	61	111	161	C ✓
12	62	112	162	D ✓
13	63	113	163	A ✓
14	64	114	164	D ✓
15	65	115	165	C ✓
16	66	116	166	A ✓
17	67	117	167	A ✓
18	68	118	168	B ✓
19	69	119	169	A ✓
20	70	120	170	D ✓
21	71	121	171	B ✓
22	72	122	172	B ✓
23	73	123	173	C ✓
24	74	124	174	B ✓
25	75	125	175	A ✓
26	76	126	176	D ✓
27	77	127	177	A ✓
28	78	128	178	B ✓
29	79	129	179	B ✓
30	80	130	180	C ✓
31	81	131	181	A ✓
32	82	132	182	B ✓
33	83	133	183	D ✓
34	84	134	184	B ✓
35	85	135	185	B ✓
36	86	136	186	D ✓
37	87	137	187	A ✓
38	88	138	188	C ✓
39	89	139	189	A ✓
40	90	140	190	B ✓

**WRITTEN EXAMINATION FOR RECRUITMENT TO THE POST OF VETERINARY  
ASSISTANT SURGEON, PURSUANT TO ADVT. NO.24 OF 2023-24 (HELD ON 28.04.2024).  
DISTRIBUTION OF QUESTIONS IN DIFFERENT SERIES WITH ANSWER IN PAPER-II**

A	B	C	D	Answer
41	91	141	191	B ✓
42	92	142	192	B ✓
43	93	143	193	C ✓
44	94	144	194	B ✓
45	95	145	195	B ✓
46	96	146	196	D ✓
47	97	147	197	B ✓
48	98	148	198	C ✓
49	99	149	199	A ✓
50	100	150	200	B ✓
51	101	151	1	C ✓
52	102	152	2	A ✓
53	103	153	3	A ✓
54	104	154	4	B ✓
55	105	155	5	A ✓
56	106	156	6	D ✓
57	107	157	7	B ✓
58	108	158	8	B ✓
59	109	159	9	A ✓
60	110	160	10	B ✓
61	111	161	11	C ✓
62	112	162	12	A ✓
63	113	163	13	D ✓
64	114	164	14	A ✓
65	115	165	15	D ✓
66	116	166	16	C ✓
67	117	167	17	B ✓
68	118	168	18	D ✓
69	119	169	19	A ✓
70	120	170	20	B ✓
71	121	171	21	A ✓
72	122	172	22	B ✓
73	123	173	23	B ✓
74	124	174	24	A ✓
75	125	175	25	D ✓
76	126	176	26	B ✓
77	127	177	27	A ✓
78	128	178	28	D ✓
79	129	179	29	C ✓
80	130	180	30	D ✓

**WRITTEN EXAMINATION FOR RECRUITMENT TO THE POST OF VETERINARY ASSISTANT SURGEON, PURSUANT TO ADVT. NO.24 OF 2023-24 (HELD ON 28.04.2024).  
DISTRIBUTION OF QUESTIONS IN DIFFERENT SERIES WITH ANSWER IN PAPER-II**

A	B	C	D	Answer
81	131	181	31	A ✓
82	132	182	32	D ✓
83	133	183	33	A ✓
84	134	184	34	B ✓
85	135	185	35	D ✓
86	136	186	36	C ✓
87	137	187	37	C ✓
88	138	188	38	D ✓
89	139	189	39	B ✓
90	140	190	40	A ✓
91	141	191	41	D ✓
92	142	192	42	B ✓
93	143	193	43	D ✓
94	144	194	44	A ✓
95	145	195	45	D ✓
96	146	196	46	D ✓
97	147	197	47	A ✓
98	148	198	48	D ✓
99	149	199	49	C ✓
100	150	200	50	B ✓
101	151	1	51	D ✓
102	152	2	52	C ✓
103	153	3	53	A ✓
104	154	4	54	C ✓
105	155	5	55	D ✓
106	156	6	56	B ✓
107	157	7	57	C ✓
108	158	8	58	C ✓
109	159	9	59	A ✓
110	160	10	60	A ✓
111	161	11	61	B ✓
112	162	12	62	B ✓
113	163	13	63	C ✓
114	164	14	64	A ✓
115	165	15	65	B ✓
116	166	16	66	D ✓
117	167	17	67	D ✓
118	168	18	68	C ✓
119	169	19	69	B ✓
120	170	20	70	C ✓



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ASSISTANT SURGEON, PURSUANT TO ADVT. NO.24 OF 2023-24 (HELD ON 28.04.2024).  
DISTRIBUTION OF QUESTIONS IN DIFFERENT SERIES WITH ANSWER IN PAPER-II**

A	B	C	D	Answer
121	171	21	71	B ✓
122	172	22	72	C ✓
123	173	23	73	A ✓
124	174	24	74	D ✓
125	175	25	75	C ✓
126	176	26	76	A ✓
127	177	27	77	B ✓
128	178	28	78	B ✓
129	179	29	79	A ✓
130	180	30	80	C ✓
131	181	31	81	B ✓
132	182	32	82	D ✓
133	183	33	83	C ✓
134	184	34	84	A ✓
135	185	35	85	B ✓
136	186	36	86	C ✓
137	187	37	87	A ✓
138	188	38	88	D ✓
139	189	39	89	C ✓
140	190	40	90	B ✓
141	191	41	91	B ✓
142	192	42	92	D ✓
143	193	43	93	A ✓
144	194	44	94	C ✓
145	195	45	95	A ✓
146	196	46	96	C ✓
147	197	47	97	C ✓
148	198	48	98	B ✓
149	199	49	99	D ✓
150	200	50	100	B ✓
151	1	51	101	A ✓
152	2	52	102	B ✓
153	3	53	103	C ✓
154	4	54	104	A ✓
155	5	55	105	B ✓
156	6	56	106	D ✓
157	7	57	107	A ✓
158	8	58	108	B ✓
159	9	59	109	A ✓
160	10	60	110	B ✓

**WRITTEN EXAMINATION FOR RECRUITMENT TO THE POST OF VETERINARY  
ASSISTANT SURGEON, PURSUANT TO ADVT. NO.24 OF 2023-24 (HELD ON 28.04.2024).  
DISTRIBUTION OF QUESTIONS IN DIFFERENT SERIES WITH ANSWER IN PAPER-II**

A	B	C	D	Answer
161	11	61	111	D ✓
162	12	62	112	C ✓
163	13	63	113	A ✓
164	14	64	114	D ✓
165	15	65	115	C ✓
166	16	66	116	B ✓
167	17	67	117	A ✓
168	18	68	118	C ✓
169	19	69	119	A ✓
170	20	70	120	D ✓
171	21	71	121	C ✓
172	22	72	122	B ✓
173	23	73	123	C ✓
174	24	74	124	C ✓
175	25	75	125	D ✓
176	26	76	126	C ✓
177	27	77	127	A ✓
178	28	78	128	D ✓
179	29	79	129	B ✓
180	30	80	130	A ✓
181	31	81	131	B ✓
182	32	82	132	C ✓
183	33	83	133	D ✓
184	34	84	134	C ✓
185	35	85	135	D ✓
186	36	86	136	B ✓
187	37	87	137	D ✓
188	38	88	138	A ✓
189	39	89	139	D ✓
190	40	90	140	A ✓
191	41	91	141	C ✓
192	42	92	142	B ✓
193	43	93	143	C ✓
194	44	94	144	C ✓
195	45	95	145	D ✓
196	46	96	146	B ✓
197	47	97	147	D ✓
198	48	98	148	A ✓
199	49	99	149	B ✓
200	50	100	150	D ✓