अभिव्याख्याता, प्राणिशास्त्र चाचणी परीक्षा- 2011

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BOOKLET No.

प्रश्नपुस्तिका

चाळणी परीक्षा

प्राणीशास्त्र विषयक ज्ञान

वेळ : $1\frac{1}{2}$ (दीड) तास

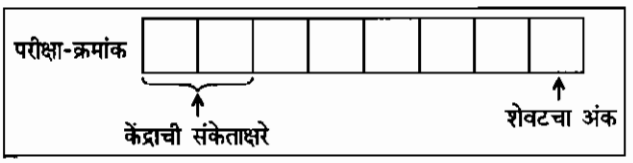
एकूण प्रश्न : 150

एकूण गुण : 150

सूचना

(1) सदर प्रश्नपुस्तिकेत **150** अनिवार्य प्रश्न आहेत. उमेदवारांनी प्रश्नांची उत्तरे लिहिण्यास सुरुवात करण्यापूर्वी या प्रश्नपुस्तिकेत सर्व प्रश्न आहेत किंवा नाहीत याची खात्री करून घ्यावी. असा तसेच अन्य काही दोष आढळल्यास ही प्रश्नपुस्तिका समवेक्षकांकडून लगेच बदलून घ्यावी.

(2) आपला परीक्षा-क्रमांक ह्या चौकोनांत **न विसरता बॉलपेनने** लिहावा.



(3) वर छापलेला प्रश्नपुस्तिका क्रमांक तुमच्या उत्तरपत्रिकेवर विशिष्ट जागी उत्तरपत्रिकेवरील सूचनेप्रमाणे **न विसरता नमूद करावा.**

(4) या प्रश्नपुस्तिकेतील प्रत्येक प्रश्नाला 4 पर्यायी उत्तरे सुचविली असून त्यांना 1, 2, 3 आणि 4 असे क्रमांक दिलेले आहेत. त्या चार उत्तरांपैकी सर्वात योग्य उत्तराचा क्रमांक उत्तरपत्रिकेवरील सूचनेप्रमाणे तुमच्या उत्तरपत्रिकेवर नमूद करावा. अशा प्रकारे उत्तरपत्रिकेवर उत्तरक्रमांक नमूद करताना तो संबंधित प्रश्नक्रमांकासमोर छायांकित करून दर्शविला जाईल याची काळजी घ्यावी. **ह्याकरिता फक्त काळ्या शाईचे बॉलपेन वापरावे, पेन्सिल वा शाईचे पेन वापरू नये.**

(5) सर्व प्रश्नांना समान गुण आहेत. यास्तव सर्व प्रश्नांची उत्तरे द्यावीत. घाईमुळे चुका होणार नाहीत याची दक्षता घेऊनच शक्य तितक्या वेगाने प्रश्न सोडवावेत. क्रमाने प्रश्न सोडविणे श्रेयस्कर आहे पण **एखादा प्रश्न कठीण वाटल्यास त्यावर वेळ न घालविता पुढील प्रश्नाकडे वळावे.** अशा प्रकारे शेवटच्या प्रश्नापर्यंत पोहोचल्यानंतर वेळ शिल्लक राहिल्यास कठीण म्हणून वगळलेल्या प्रश्नांकडे परतणे सोईस्कर ठरेल.

(6) उत्तरपत्रिकेत एकदा नमूद केलेले उत्तर खोडता येणार नाही. नमूद केलेले उत्तर खोडून नव्याने उत्तर दिल्यास ते तपासले जाणार नाही.

(7) **प्रस्तुत परीक्षेच्या उत्तरपत्रिकांचे मूल्यांकन करताना उमेदवाराच्या उत्तरपत्रिकेतील योग्य उत्तरांनाच गुण दिले जातील. तसेच "उमेदवाराने वस्तुनिष्ठ बहुपर्यायी स्वरूपाच्या प्रश्नांची अचूक उत्तरेच उत्तरपत्रिकेत नमूद करावीत. अन्यथा त्यांच्या उत्तरपत्रिकेत सोडविलेल्या प्रत्येक चार चुकीच्या उत्तरांसाठी एका प्रश्नाचे गुण वजा करण्यात येतील".**

पर्यवेक्षकांच्या सूचनेविना हे सील उघडू नये

ताकीद

ह्या प्रश्नपत्रिकेसाठी आयोगाने विहित केलेली वेळ संपेपर्यंत ही प्रश्नपुस्तिका आयोगाची मालमत्ता असून ती परीक्षाकक्षात उमेदवाराला परीक्षेसाठी वापरण्यास देण्यात येत आहे. ही वेळ संपेपर्यंत सदर प्रश्नपुस्तिकेची प्रत/प्रती, किंवा सदर प्रश्नपुस्तिकेतील काही आशय कोणत्याही स्वरूपात प्रत्यक्ष वा अप्रत्यक्षपणे कोणत्याही व्यक्तीस पुरविणे, तसेच प्रसिद्ध करणे हा गुन्हा असून अशी कृती करणाऱ्या व्यक्तीवर शासनाने जारी केलेल्या "परीक्षांमध्ये होणाऱ्या गैरप्रकारांना प्रतिबंध करण्याबाबतचा अधिनियम-82" यातील तरतुदीनुसार तसेच प्रचलित कायद्याच्या तरतुदीनुसार कारवाई करण्यात येईल व दोषी व्यक्ती कमाल एक वर्षाच्या कारावासाच्या आणि/किंवा रुपये एक हजार रकमेच्या दंडाच्या शिक्षेस पात्र होईल.

तसेच ह्या प्रश्नपत्रिकेसाठी विहित केलेली वेळ संपण्याआधी ही प्रश्नपुस्तिका अनधिकृतपणे बाळगणे हा सुद्धा गुन्हा असून तसे करणारी व्यक्ती आयोगाच्या कर्मचारीवृंदापैकी, तसेच परीक्षेच्या पर्यवेक्षकीयवृंदापैकी असली तरीही अशा व्यक्तीविरुद्ध उक्त अधिनियमानुसार कारवाई करण्यात येईल व दोषी व्यक्ती शिक्षेस पात्र होईल.

पुढील सूचना प्रश्नपुस्तिकेच्या अंतिम पृष्ठावर पहा

कच्च्या कामासाठी जागा / SPACE FOR ROUGH WORK

1. Which animal has chief mode of nutrition as halophytic ?
   (1) Plasmodium (2) Amoeba
   (3) Paramoecium (4) Euglena

2. To whose larvae, the echinoderm larvae has a close resemblance ?
   (1) Annelids (2) Coelenterates (3) Arthropods (4) Poriferans

3. Which locomotory organ does Amoeba possess ?
   (1) Flagella (2) Pseudopodia (3) Cilia (4) None of these

4. Name the animal in which conjugation occurs.
   (1) Euglena (2) Giardia (3) Noctiluca (4) Paramoecium

5. What does *Giardia* cause ?
   (1) Malaria (2) Sleeping sickness
   (3) Diarrhoea (4) Kala azar

6. In which animal is the most advanced leucon type canal system found ?
   (1) Aphodal (2) Rhagon (3) Diploidal (4) Euryphylus

7. Which is the first step in the development of skeleton around the protozoa ?
   (1) Theca (2) Lorica (3) Envelop (4) Test

8. What are the vertical branches of Obelia colony called ?
   (1) Gonotheca (2) Hydrotheca (3) Hydrorhiza (4) Hydrocauli

9. Name the shallow coral reef extending from the shore upto 1/4 miles into sea water.
   (1) Barrier reef (2) Fringing reef
   (3) Atoll reef (4) Lagoon island

SPACE FOR ROUGH WORK

10. Which is the larval stage of *Taenia Solium* ?

(1) Onchosphere (2) Miracidium

(3) Redia (4) Cercarium

11. How can we prevent from Ascaris ?

(1) Keeping good sanitary conditions

(2) Eating fresh raw vegetables and nuts

(3) Washing hands without antiseptic soap

(4) Drinking excess of water

12. How many pairs of pulsatile hearts are present in earthworm ?

(1) 3 (2) 4 (3) 5 (4) 6

13. Name the animal which is sanguinovorous in habit.

(1) Arenicola (2) Chaetopterus

(3) Leech (4) Aphrodite

14. Which connecting link has been shown by Onchosphorous ?

(1) Platyhelminthes and Aschelminthes

(2) Entoprocts and Nemertines

(3) Annelids and Arthropods

(4) Ectoprocts and Brachiopods

15. Which type of mouth parts do the house flies possess ?

(1) Piercing and Sucking type (2) Sponging type

(3) Chewing and Lapping type (4) Biting and Chewing type

16. In which animal is the metamorphosis absent ?

(1) Lepisma (2) Cockroach (3) Butterfly (4) House-fly

SPACE FOR ROUGH WORK

17. At what angle is the body of gastropods rotated on a vertical axis during complete torsion ?

(1) 360° (2) 180° (3) 90° (4) 60°

18. Which organ in Molluscs forms elongated funnel or siphons during respiration for the entry and exit of water ?

(1) Pulmonary sacs (2) Gills

(3) Trachea (4) Nuchal lobes

19. Which symmetry does the Liver fluke exhibit ?

(1) Bilateral (2) Radial

(3) Asymmetry (4) None of these

20. Which animal has no madreporite ?

(1) Crinoids (2) Holothuroids

(3) Echinoids (4) Ophiuroids

21. Which of the following characteristics of Balanoglossus resembles that of chordates ?

(1) Gill slits and their blood supply

(2) Possession of notochord

(3) Possession of dorsal hollow nerve cord

(4) All of these

22. What is meaning of the term 'Retrogressive metamorphosis' ?

(1) Larva shows more advanced characters than the adult

(2) Larva shows less advanced characters than the adult

(3) Larva does not show metamorphosis

(4) Larva shows very slow metamorphosis

SPACE FOR ROUGH WORK

23. Which of the following is true in case of gills of bony fish ?

(1) They do not have gill rakers
(2) They open via gill slits
(3) They are filiform
(4) They are lamelliform

24. Which of the following structures of Amphioxus form a grating to help filter feeding ?

(1) Velar tentacles
(2) Oral cirri
(3) Oral palps
(4) All of these

25. What mode of parental care is shown by European Midwife Toad, Alytes ?

(1) Building nest
(2) Female carrying eggs on the back
(3) Male carrying eggs round the back and thighs
(4) Female carrying eggs in brood pouch

26. From the time of their emergence, amphibians have remained imperfectly adapted for terrestrial life because

(1) they cannot breath out of water for a long time
(2) their food source is chiefly found in water
(3) they need aquatic habitat to breed
(4) All of these

27. Neotenic forms are exhibited in which of the following order of Amphibia ?

(1) Anura (2) Urodela (3) Apoda (4) All of these

28. Which of the following early reptiles are also called 'stem reptiles' ?

(1) Pleisiosaurs
(2) Cotylosaurs
(3) Dinosaurs
(4) Ichthyosaurs

SPACE FOR ROUGH WORK

29. Which type of reptilian skull has a single temporal fossa that separates post orbital and squamosal bone ?

(1) Anapsid (2) Diapsid (3) Synapsid (4) Parapsid

30. Poison gland found in venomous snakes is a modified

(1) sub-lingual gland (2) parotid gland

(3) sub-maxillary gland (4) mandibular gland

31. The reduction or complete loss of flight has taken place in flightless birds due to

(1) absence of predators

(2) it allowed reduction in wing size

(3) assumption of bulk mass of muscles

(4) All of these

32. The navigational ability amongst the migrating birds is essentially due to

(1) following routes and landmarks

(2) the altitude of migrating land

(3) inherited instinct

(4) accuracy and regularity of migration

33. Ducks possess _____ type of palate.

(1) Dromeognathus (2) Schizognathus

(3) Aegithognathus (4) Desmognathus

34. Which of the following denotes tail feathers in birds ?

(1) Retrices (2) Remiges (3) Coverts (4) Contours

SPACE FOR ROUGH WORK

35. The dental formula $2\left[\text{i}\ \frac{3}{3}\ \text{c}\ \frac{1}{1}\ \text{p m}\ \frac{4}{4}\ \text{m}\ \frac{3}{3}\right]$ is of

(1) Human permanent dentition (2) Human milk dentition

(3) Horse dentition (4) Cow dentition

36. Marsupials are mammals belonging to Infra class

(1) Prototheria (2) Metatheria (3) Theria (4) Eutheria

37. Which of the following is ***not*** an exclusively ectodermal derivative ?

(1) Hair (2) Nail (3) Horn (4) Tooth

38. Which of the following classes possesses only the right systemic arch ?

(1) Aves (2) Reptilia (3) Amphibia (4) Mammalia

39. Neuromast are the sensory cells present in

(1) olfactory organs of fishes (2) lateral lines of fishes

(3) inner ear of vertebrates (4) middle ear of vertebrates

40. The functional kidney of an adult mammal is developed from

(1) pronephros (2) mesonephros

(3) prenephros (4) metanephros

41. Body temperature regulating center is situated in

(1) Limbic system (2) Lateral lemniscus

(3) Hypothalamus (4) Anterior thalamic nucleus

SPACE FOR ROUGH WORK

42. Fresh water bony fishes maintain water balance by excreting

(1) Ammonia (2) Urea

(3) Guanine (4) Waste in the form of Uric acid

43. Pepsinogen is secreted by

(1) Chief cells (2) Oxyntic cells

(3) Parietal cells (4) Goblet cells

44. Following are the phases of gastric juice secretion *except*

(1) Cephalic (2) Gastric (3) Oesophageal (4) Intestinal

45. The aim to release stepwise energy in respiration is

(1) To conserve more energy (2) To prevent cell damage

(3) To maintain body temperature (4) All of these

46. Following are the factors affecting filtration of substances through glomerular membrance *except*

(1) Temperature (2) Molecular weight

(3) Effective diameter (4) Electrical charges

47. Following are functions of Eosinophils *except*

(1) antibody production (2) ingestion of foreign proteins

(3) defence against parasites (4) help in resolution and healing

48. Following are the refractive media of human eye *except*

(1) Cornea (2) Retina

(3) Aqueous humor (4) Vitreous humor

SPACE FOR ROUGH WORK

49. One haemoglobin molecule has

(1) one haem and one globin (2) four haem and four globin

(3) two haem and two globin (4) three haem and two globin

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50. Surfactant present in the alveoli is responsible for

(1) collapse of lung (2) increasing the surface tension

(3) reducing the surface tension (4) no effect on the surface tension

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51. In human ear, impedance matching causes

(1) increase in pressure at oval window

(2) decrease in pressure at oval window

(3) increase in frequency at oval window

(4) decrease in frequency at oval window

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52. Following hormones are secreted by anterior pituitary gland *except*

(1) ACTH (2) FSH (3) Prolactin (4) ADH

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53. Growth hormone has following effects *except*

(1) increased rate of protein synthesis

(2) decreased rate of glucose utilization

(3) increased rate of glucose absorption by cells

(4) increased mobilization of fatty acids

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54. Adreno Cortico Trophic Hormone stimulates synthesis and secretion of

(1) ADH (2) Aldosterone

(3) Adrenaline (4) Noradrenaline

SPACE FOR ROUGH WORK

55. BMR is controlled by

(1) ADH (2) GH (3) Thyroxine (4) ACTH

56. Diabetes insipidus is caused due to the deficiency of

(1) Oxytocin (2) Vassopressin (3) Insulin (4) Glucagon

57. After transmission of one impulse from the synapse, it cannot transmit another impulse because one of the following chemicals is active there :

(1) Choline (2) Acetylcholine (3) Cholinesterase (4) Acetic acid

58. Synaptic fatigue is due to

(1) release of more acetylcholine (2) release of more adrenaline

(3) release of more noradrenaline (4) exhaustion of neurotransmitter

59. Which of the following hormones from pituitary is responsible for activation of breast during pregnancy, secretion of milk after birth and functioning of corpus luteum during pregnancy ?

(1) FSH (2) LTH (3) Prolactin (4) ADH

60. Testosterone is secreted by

(1) Sertoli cells (2) Leydig cells

(3) Spermatozoa (4) Secondary spermatocyte

61. Energy flow in the ecosystem is

(1) Unidirectional (2) Amphidirectional

(3) Multidirectional (4) None of these

SPACE FOR ROUGH WORK

62. The nitrogen cycle is of type

(1) Sedentary (2) Hydrological

(3) Gaseous (4) None of these

63. The source of phosphorus in the nature is

(1) Volcanoes (2) Sedimentary rocks

(3) Both (1) and (2) (4) Fresh water

64. Fixation of nitrogen is carried out by all the following *except*

(1) Avicennia (2) Rhizobium (3) Anabaena (4) Nostoc

65. The first trophic level in the exchange of energy is

(1) Decomposers (2) Consumers

(3) Producers (4) None of these

66. Green house effect is

(1) moisture layer in the atmosphere

(2) ozone layer in the atmosphere

(3) infra red waves reach the earth

(4) increase in temperature due to increase in CO_2 concentration of atmosphere

67. The effects of ozone on human health are all the following *except*

(1) extreme fatigue (2) atherosclerosis

(3) nose and throat irritation (4) pulmonary oedema

68. The greatest problem in water conservation is to reduce the amount of

(1) Ground water (2) Precipitation

(3) Evaporation (4) Run-off water

SPACE FOR ROUGH WORK

69. The volant adaptations of birds are all the following *except*

(1) stream-lined body (2) development of feathers

(3) development of air-sacs (4) absence of urinary bladder

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70. The following are the desert adaptations of animals *except*

(1) development of parapodia (2) moisture getting

(3) moisture conservation (4) self-defence against scorching sun

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71. The following are the National Parks in Maharashtra *except*

(1) Tadoba (2) Navegaon (3) Gir (4) Pench

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72. Which endangered animal is the source of the world's finest, lightest, warmest and most expensive wool — the Shahtoosh ?

(1) Cheetah (2) Nilgai (3) Chiru (4) Kashmiri goat

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73. Project Tiger was started in

(1) 1973 (2) 1975 (3) 1987 (4) 1988

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74. Red Data Book is famous for

(1) endangered plants (2) endangered animals

(3) extinct plants (4) endangered plants and animals

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75. The resemblance of the warning colouration of one noxious species to another is

(1) Batesian mimicry (2) Mullerian mimicry

(3) Martesian mimicry (4) Auto mimicry

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76. Who proposed the fluid mosaic model of protein ?

(1) Gilter (1972) (2) Singer and Nicolson (1972)

(3) Garter and Grendel (1926) (4) Danielli and Davson (1935)

SPACE FOR ROUGH WORK

77. Which spaces of Endoplasmic Reticulum are rounded, spherical and ovoidal ?

(1) Cisternae (2) Tubules (3) Cytomembranes (4) Vesicles

78. Which part of the spermatozoa is derived from Golgi body spermatid ?

(1) Acrosome (2) Tail (3) Nucleus (4) Cytoplasm

79. On hydrolysis, what do the ribosomes produce ?

(1) Acidic protein and DNA (2) Protein and DNA

(3) Split protein and rRNA (4) Basic protein and rRNA

80. In what do mitochondria help ?

(1) Protein synthesis (2) Development of myofibrils

(3) Removal of exhausted cells (4) Formation of lysosomes and vacuoles

81. On the basis of synthetic activities, in how many distinct periods the interphase of mitosis is divided ?

(1) 5 (2) 4 (3) 3 (4) 2

82. Which is the longest phase of meiosis ?

(1) Prophase I (2) Prophase II (3) Metaphase (4) Anaphase

83. What is property of the band of polytene chromosome ?

(1) Temporary inactive (2) Temporary active

(3) Permanently inactive (4) Permanently active

84. Which are the building blocks of DNA ?

(1) Nucleosides (2) Phosphate groups of nucleotides

(3) Nucleotides (4) Nitrogen bases of nucleotides

SPACE FOR ROUGH WORK

85. What is the other name of informosomes ?

(1) mRNA (2) rRNA (3) tRNA (4) DNA

86. What is the nucleotide sequence of mRNA which codes for a particular amino acid ?

(1) Phosphate group (2) Sugar group

(3) Code (4) Nucleosite

87. How many nitrogenous bases of mRNA are present in a codon of the modern genetic code ?

(1) 3 (2) 4 (3) 1 (4) 2

88. In what way the punctuation help on polycistronic mRNA ?

(1) For adding the different cistrons

(2) For eliminating the different cistrons

(3) For synthesizing the different cistrons

(4) For framing the new cistrons

89. In which group of chromosomes the arms are 'V' shaped ?

(1) Acrocentric (2) Telocentric

(3) Metacentric (4) Submetacentric

90. Who directs enzymatic action in transcription process in which mRNA is copied or transcribed from a DNA strand ?

(1) DNA directed DNA polymerase

(2) RNA directed DNA polymerase

(3) DNA directed RNA polymerase

(4) RNA directed RNA polymerase

SPACE FOR ROUGH WORK

91. The melting point of mitochondrial DNA is _____ compared to nuclear DNA.

(1) higher (2) similar (3) lower (4) negligible

92. Which nitrogenous base is substituted in RNA in place of thymine of DNA ?

(1) Adenine (2) Guanine (3) Uracil (4) Cytosin

93. What type of nuclei are present in RBCs of man ?

(1) Mononucleate (2) Anucleate

(3) Binucleate (4) Multinucleate

94. Who first observed the Lampbrush chromosomes in amphibian oocyte ?

(1) J. Roberts (1892) (2) Miller and Beatty (1969)

(3) Callan and Llyod (1960) (4) Flemming (1882)

95. How many types of enzymes are required in replication of DNA ?

(1) 5 (2) 3 (3) 2 (4) 4

96. If a plant heterozygous for tallness is selfed, the F_2 generation has both tall and dwarf plants. This proves the principle of

(1) Dominance (2) Purity of gametes

(3) Independent assortment (4) Incomplete dominance

97. When a hybrid pea plant for yellow round seeds (YyRr) is self pollinated, the phenotypic ratio in the next generation would be

(1) 12 : 3 (2) 9 : 7

(3) 9 : 3 : 3 : 1 (4) 1 : 2 : 2 : 1 : 4 : 1 : 2 : 2 : 1

SPACE FOR ROUGH WORK

98. The chromosome theory of linkage is formulated by

(1) Morgan and Castle (2) Sutton and Boveri

(3) Bateson and Punnett (4) Mendel and Lamprecht

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99. The important features of multiple alleles are all the following *except*

(1) always occupy the same locus

(2) crossing-over occurs within the alleles of same multiple allele series

(3) no crossing-over occurs within the alleles of same multiple allele series

(4) always influence the same character

---

100. The different kinds of polyploids are the following *except*

(1) Autopolyploid (2) Allopolyploid

(3) Aneupolyploid (4) Autoallopolyploid

---

101. The point mutation may occur due to

(1) deletion mutation (2) inversion mutation

(3) insertion mutation (4) substitutional mutation

---

102. The webbed neck is a characteristic of

(1) XXY (2) XYY (3) XY (4) XO

---

103. Down's syndrome is a typical case of

(1) Monosomy (2) Trisomy (3) Nullisomic (4) Tetraploid

---

104. The term Eugenics was coined by

(1) Francis Galton (2) H.J. Muller

(3) Clarence McClung (4) Edmond Wilson

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105. A clone of Sheep Dolly was developed by

(1) Ian Wilmut (2) Robert Bricks

(3) Ian Koch (4) Hales

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106. Human Genome Project was launched in

(1) 1986 (2) 1990 (3) 1996 (4) 1998

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107. The technique of DNA fingerprinting was pioneered and perfected by

(1) Beadle (2) Francois Jacob

(3) Jacques Monod (4) Alec Jeffreys

---

108. The basis used for DNA fingerprinting needs

(1) availability of cloned DNA (2) availability of VNTRs

(3) availability of human genome (4) variations in the offsprings

---

109. The transgenic animal has

(1) foreign DNA in all its cells (2) foreign DNA in some of the cells

(3) foreign RNA in all its cells (4) Both (2) and (3)

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110. A direct procedure to copy the gene sequence of interest is called

(1) PCR (2) BCG (3) PIR (4) CPU

---

111. Which language is most suitable for the work of Bioinformatics ?

(1) XML (2) HTML (3) PERL (4) Java

---

112. The tools of Bioinformatics to identify functional domains of proteins are

(1) PROSITE (2) BLOCKS (3) PRINTS (4) All of these

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113. One of the following helps in identification and interpretation of protein sequencing informations :

(1) PCR (2) NCBI (3) NBRF (4) EBI

114. One of the following is a protein database :

(1) Mito (2) SWISS-PROT

(3) NCBI (4) Gene Bank

115. Which chemical database is used to search sequences of metabolic enzymes ?

(1) DDBJ (2) PDB

(3) Ligand (4) Molecular biology

116. Which of the following monosaccharides is a ketose ?

(1) Glucose (2) Galactose (3) Fructose (4) Ribose

117. Which polysaccharide is present in the bacterial cell wall ?

(1) Chitin (2) Murein (3) Lignin (4) Pectin

118. Which of the following is an unsaturated free fatty acid ?

(1) Oleate (2) Palmitate (3) Stearate (4) Laurate

119. Ceramide is the precursor of which class of lipids ?

(1) Sphingomyelin (2) Triglycerides

(3) Waxes (4) None of these

120. Which hormone does ***not*** have cholesterol as its precursor ?

(1) Progesterone (2) Glucagon

(3) Estrogen (4) Mineralocorticoid

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121. Which of the following is a sulphur containing amino acid ?

(1) Methionine (2) Valine (3) Glycine (4) Serine

122. Haemoglobin is a protein that possesses _____ level of structure.

(1) primary (2) secondary (3) tertiary (4) quaternary

123. Fibroin protein that makes silk has a structure which is

(1) α-helical (2) β-pleated sheet

(3) triple helix (4) None of these

124. Conversion of α-ketoglutarate to succinyl-CoA is a _____ reaction.

(1) oxidation (2) oxidative phosphorylation

(3) oxidative decarboxylation (4) dehydrogenation

125. How many molecules of ATP are made for each reduced FAD molecule that enters the electron transport chain ?

(1) Two (2) Three (3) One (4) None of these

126. Which vitamin deficiency causes pernicious anaemia ?

(1) B_1 (2) B_2 (3) B_6 (4) B_{12}

127. Over a range of 0 – 40°C, the rate of an enzyme controlled reaction is doubled for the rise of every

(1) 5°C (2) 2°C (3) 10°C (4) 1°C

128. As per Michaelis – Menten equation, in an enzyme catalyzed reaction $K_m = [S]$ when

(1) $V = V_{max}/2$ (2) $V = 2(V_{max})$

(3) $V = 3(V_{max})$ (4) $V = V_{max}$

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129. Which is the most important control element/enzyme in the glycolytic pathway of mammals ?

(1) Pyruvate kinase (2) Phosphofructokinase

(3) Hexokinase (4) Glucokinase

130. To which class does the vaccine produced against diphtheria belong ?

(1) Killed organisms (2) Toxoid

(3) Edible vaccine (4) Live vaccine

131. The HIV virus which causes AIDS mainly infects _____ cells.

(1) T-helper cells (2) T-killer cells

(3) T-suppressor cells (4) All of these

132. Which type of lymphatic cell is responsible for production of antibodies ?

(1) NK cells (2) Macrophages

(3) Memory cells (4) Plasma cells

133. Monoclonal antibodies are used in

(1) pregnancy testing (2) treating diseases

(3) immunesuppressors (4) All of these

134. Which of the following enzymes synthesizes Duplex DNA from RNA template ?

(1) DNA polymerase (2) Reverse transcriptase

(3) RNA polymerase (4) RNA transcriptase

135. Which is the principal antibody found in the serum ?

(1) IgM (2) IgA (3) IgE (4) IgG

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136. Which animal has non-flagellated sperm ?

(1) Sea urchins (2) Ascaris

(3) Echidna (4) Frog

---

137. How many phases are involved in oogenesis ?

(1) 2 (2) 3 (3) 4 (4) 5

---

138. What do you call the jelly layer of eggs of amphibian which help in protection and adhere ?

(1) Primary egg membrane (2) Secondary egg membrane

(3) Tertiary egg membrane (4) Vitelline membrane

---

139. What is involved in the removal of some kind of inhibiting material from the sperm and making it capable of fertilizing the egg ?

(1) Chemotaxis (2) Cortical reaction

(3) Amphioxus (4) Capacitation

---

140. Which material of the acrosome helps the sperm to dissolve the matrix of cumulus oophorus for penetration ?

(1) Hyaluronidase (2) Fertilizin

(3) Jelly (4) Lysosome

---

141. What do you call it if there is a production of an embryo from a female gamete without the participation of male gamete ?

(1) Parthenogenesis (2) Sexual reproduction

(3) Asexual reproduction (4) Syngamy

---

142. The development of which animal shows indeterminate cleavage ?

(1) Nematodes (2) Echinoderms

(3) Annelids (4) Molluscs

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143. What do you call it if during gastrulation, the blastomere separates or splits off from a pre-existing layer or mass to become the hypoblast ?

(1) Infilteration (2) Invagination (3) Involution (4) Delamination

144. Which fetal membrane acts as a reservoir of embryonic excretory waste such as uric acid ?

(1) Amnion (2) Chorion (3) Allantois (4) Yolk sac

145. In which placenta the chorionic villi remains scattered all over the surface of the chorion ?

(1) Diffused (2) Cotyledonary (3) Zonary (4) Discordal

146. In which contraceptive method, the vas deferens on each side is cut and tied in a major surgical operation ?

(1) Tubectomy (2) Vaginal douche

(3) Spermaticidal jellies (4) Vasectomy

147. Name the giant fresh water prawn.

(1) *Macrobrachium rosenbergii* (2) *Penaeus indicus*

(3) *Parapenaeopsis sculptilis* (4) *Metapenaeus monoceros*

148. Which is the proper place for rearing silkworms ?

(1) Machana (2) Dalas (3) Baskets (4) Rearing trays

149. Which component does the pearl contain abundantly ?

(1) Water (2) Organic matter

(3) Calcium carbonate (4) Residue

150. Name the most popular American class of hen.

(1) Plymouth Rock (2) Langshan

(3) Cornish (4) White Leghorn

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सूचना - (पृष्ठ 1 वरुन पुढे....)

(8) प्रश्नपुस्तिकेमध्ये विहित केलेल्या विशिष्ट जागीच कच्चे काम (रफ वर्क) करावे. प्रश्नपुस्तिकेव्यतिरिक्त उत्तरपत्रिकेवर वा इतर कागदावर कच्चे काम केल्यास ते कॉपी करण्याच्या उद्देशाने केले आहे, असे मानले जाईल व त्यानुसार उमेदवारावर शासनाने जारी केलेल्या "परीक्षांमध्ये होणाऱ्या गैरप्रकारांना प्रतिबंध करण्याबाबतचे अधिनियम-82" यातील तरतुदीनुसार कारवाई करण्यात येईल व दोषी व्यक्ती कमाल एक वर्षाच्या कारावासाच्या आणि/किंवा रुपये एक हजार रकमेच्या दंडाच्या शिक्षेस पात्र होईल.

(9) सदर प्रश्नपत्रिकेसाठी आयोगाने विहित केलेली वेळ संपल्यानंतर उमेदवाराला ही प्रश्नपुस्तिका स्वतः बरोबर परीक्षाकक्षाबाहेर घेऊन जाण्यास परवानगी आहे. **मात्र परीक्षा कक्षाबाहेर जाण्यापूर्वी उमेदवाराने आपल्या उत्तरपत्रिकेचा भाग-1 समवेक्षकाकडे न विसरता परत करणे आवश्यक आहे.**

नमुना प्रश्न

Pick out the correct word to fill in the blank :

Q. No. 201. I congratulate you _____ your grand success.

(1) for (2) at (3) on (4) about

ह्या प्रश्नाचे योग्य उत्तर "(3) on" असे आहे. त्यामुळे या प्रश्नाचे उत्तर "(3)" होईल. यास्तव **खालीलप्रमाणे** प्र.क्र. **201** समोरील उत्तर-क्रमांक "③" हे वर्तुळ पूर्णपणे छायांकित करून दाखविणे आवश्यक आहे.

प्रश्न क्र. **201.** ① ② ● ④

अशा पद्धतीने प्रस्तुत प्रश्नपुस्तिकेतील प्रत्येक प्रश्नाचा तुमचा उत्तरक्रमांक हा तुम्हाला स्वतंत्ररीत्या पुरविलेल्या उत्तरपत्रिकेवरील त्या त्या प्रश्नक्रमांकासमोरील संबंधित वर्तुळ पूर्णपणे छायांकित करून दाखवावा. **ह्याकरिता फक्त काळ्या शाईचे बॉलपेन वापरावे, पेन्सिल वा शाईचे पेन वापरू नये.**

कच्च्या कामासाठी जागा / SPACE FOR ROUGH WORK