



ROM

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कच्च्या कामासाठी जागा / SPACE FOR ROUGH WORK IS

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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
- 

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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 sanguivorous 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
- 

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17. At what angle is the body of gastropods rotated on a vertical axis during comp. torsion ?  
(1)  $360^\circ$                       (2)  $180^\circ$                       (3)  $90^\circ$                       (4)  $60^\circ$
- 
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
- 

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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
- 

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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
- 

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35. The dental formula  $2 \left[ \begin{matrix} i & 3 & c & 1 \\ 3 & & 1 & \end{matrix} \right] p m \begin{matrix} 4 & m & 3 \\ 4 & & 3 \end{matrix}$  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
- 

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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 membrane *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 |
- 

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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
- 

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
- 

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
- 

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

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

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
- 

54. Adreno Cortico Trophic Hormone stimulates synthesis and secretion of

- (1) ADH    (2) Aldosterone  
 (3) Adrenaline    (4) Noradrenaline
- 

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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
- 

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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<sub>2</sub> 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
- 

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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
- 
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
- 
71. The following are the National Parks in Maharashtra *except*
- (1) Tadoba (2) Navegaon (3) Gir (4) Pench
- 
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
- 
73. Project Tiger was started in
- (1) 1973 (2) 1975 (3) 1987 (4) 1988
- 
74. Red Data Book is famous for
- (1) endangered plants (2) endangered animals  
(3) extinct plants (4) endangered plants and animals
- 
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
- 
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)

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77. Which spaces of Endoplasmic Reticulum are rounded, spherical and ovoid?  
(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
- 

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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
- 

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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) Cytosine
- 
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 Lloyd (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
- 

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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 |
- 
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
- 

106. Human Genome Project was launched in

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

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)
- 

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 sequence 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)  $\alpha$ -helical (2)  $\beta$ -pleated sheet  
(3) triple helix (4) None of these
- 

124. Conversion of  $\alpha$ -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<sub>1</sub> (2) B<sub>2</sub> (3) B<sub>6</sub> (4) B<sub>12</sub>
- 

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) Infiltration (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 वरून पुढे....)

- (8) प्रश्नपुस्तिकेमध्ये विहित केलेल्या विशिष्ट जागीच कच्चे काम (रफ वर्क) करावे. प्रश्नपुस्तिकेव्यतिरिक्त उत्तरपत्रिकेवर वा इतर कागदावर कच्चे काम केल्यास ते काँपी 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