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ROLL No.

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TEST BOOKLET No.

280

TEST FOR POST GRADUATE PROGRAMMES

ZOOLOGY

Time: 2 Hours

Maximum Marks: 450

INSTRUCTIONS TO CANDIDATES

1. You are provided with a Test Booklet and an Optical Mark Reader (OMR) Answer Sheet to mark your responses. Do not soil the Answer Sheet. Read carefully all the instructions given on the Answer Sheet.
 2. Write your Roll Number in the space provided on the top of this page.
 3. Also write your Roll Number, Test Code, and Test Subject in the columns provided for the same on the Answer Sheet. Darken the appropriate bubbles with a **Ball Point Pen**.
 4. The paper consists of 150 objective type questions. All questions carry equal marks.
 5. Each question has four alternative responses marked **A, B, C** and **D** and you have to **darken** the bubble fully by a **Ball Point Pen** corresponding to the correct response as indicated in the example shown on the Answer Sheet.
 6. Each correct answer carries 3 marks and each wrong answer carries 1 minus mark.
 7. Please do your rough work only on the space provided for it at the end of this Test Booklet.
 8. You should return the Answer Sheet to the Invigilator before you leave the examination hall. However, you can retain the Test Booklet.
 9. Every precaution has been taken to avoid errors in the Test Booklet. In the event of such unforeseen happenings the same may be brought to the notice of the Observer/Chief Superintendent in writing. Suitable remedial measures will be taken at the time of evaluation, if necessary.
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SEAL



61512

1

ZOOLOGY

1. The book "Origin of Species" was written by
 - (A) Alfred Wallace
 - (B) Linnaeus
 - (C) Charles Darwin
 - (D) T.B. Lamarck

2. Which one of the following is organic catalyst?
 - (A) Vitamin
 - (B) Bile
 - (C) Hormone
 - (D) Enzyme

3. Albinism is due to lack of
 - (A) melanin
 - (B) actin
 - (C) myosin
 - (D) cyanin

4. Assimilatory unit of protein is
 - (A) glucose
 - (B) amino acid
 - (C) maltose
 - (D) sucrose

5. Which one of the following is not soluble in water?
 - (A) Vitamin B
 - (B) Vitamin D
 - (C) Vitamin B-12
 - (D) Ascorbic acid

6. Accessory respiratory organs are present in
 - (A) clarias
 - (B) labeo
 - (C) scoliiodon
 - (D) exocoetus

7. In lungs, exchange of gases occurs in
 - (A) alveoli
 - (B) tracheole
 - (C) bronchiole
 - (D) vennule

8. Copper molecule is present in
 - (A) myoglobin
 - (B) haemocyanin
 - (C) hemoglobin
 - (D) erythrosine

9. Mesonephric kidneys are found in
- (A) fishes (B) birds
(C) lizards (D) mammals
10. Cerebral hemisphere is concerned with
- (A) control of voluntary muscles (B) control of involuntary muscles
(C) equilibrium (D) memory and intelligence
11. VII cranial nerve is termed as
- (A) facial (B) hypoglossal
(C) ocular (D) vagus
12. The hormone Ecdysone is concerned with
- (A) metamorphosis (B) lactation
(C) moulting (D) ovulation
13. Sleeping sickness is caused by
- (A) plasmodium (B) monocystis
(C) entamoeba (D) trypanosoma
14. Dysentery and liver abscess is caused by
- (A) *Entamoeba histolytica* (B) *Plasmodium vivax*
(C) *Euglena viridis* (D) *Trypanosoma gambianse*
15. In which of the following animal true tissue does not exist?
- (A) Hydra (B) Sycon
(C) Planaria (D) Liverfluke
16. Mesogloea is present in
- (A) hydra (B) sponge
(C) planaria (D) ascaris



61512

3

17. Antenary (green) glands are excretory organs of
- (A) prawn (B) hook worm
(C) starfish (D) round worm
18. Spiracles are present in
- (A) insects (B) hydrozoans
(C) gastropods (D) poriferans
19. Which one of the following is called as living fossil?
- (A) Limulus (B) Amoeba
(C) Paleomon (D) Neries
20. Which one of the following has bivalve shell?
- (A) Bipinnaria (B) Trochopore
(C) Glochidium (D) Auricularia
21. Torsion is found in
- (A) scaphopoda (B) gastropoda
(C) myriopoda (D) cephalopoda
22. Ink gland is present in
- (A) cat fish (B) nauplius
(C) fresh water mussel (D) cuttle fish
23. Tube feet are found in
- (A) annelids (B) coelentrates
(C) echinoderms (D) birds
24. Tornaria is the larva of
- (A) starfish (B) balanoglossus
(C) gold fish (D) ascidia



61512

4

25. In which of the following protonephridium is the excretory organ?
- (A) Amphioxus (B) Petromyzon
(C) Shark (D) Hag fish
26. Jaw less vertebrates are known as
- (A) placoderms (B) dipnoians
(C) ostracoderms (D) agnathans
27. Which one of the following is green house gas?
- (A) Oxygen (B) Carbon dioxide
(C) Ozone (D) Nitrogen
28. Heterocercal tail is found in
- (A) shark (B) mackerel
(C) catfish (D) labeo
29. Urostyle is present in
- (A) frog (B) fish
(C) lizard (D) cyclostomes
30. Mouth parts of mosquito are for
- (A) biting and chewing (B) siphoning
(C) sponging (D) piercing and sucking
31. Left aortic arch is present in
- (A) monkey (B) king fisher
(C) owl (D) pigeon
32. Second vertebrae of the cervical region is called as
- (A) Sacral (B) Atlas
(C) Lumbar (D) Axis



61512

5

33. Nilgiri is a
- (A) Sanctuary (B) Biosphere Reserve
(C) National park (D) Reserved forest
34. Cycloid scales are not found in
- (A) ophiocephalus (B) labeo
(C) rohita (D) scoliodon
35. Which one of the following is tailed amphibian?
- (A) Bull frog (B) Salamander
(C) Hyla (D) Toad
36. Modified diapsidan skull is found in
- (A) crocodile (B) turtle
(C) sphenodon (D) calotes
37. Air sacs are absent in
- (A) pigeon (B) penguin
(C) jacana (D) hawk
38. Double solid ventral nerve cord is the character of
- (A) protochordates (B) invertebrates
(C) vertebrates (D) agnathans
39. Which one of the following is a sea snake?
- (A) Naja naja (B) Viper russeli
(C) Bungarus (D) Hydophis
40. Dolphins and whales are placed under the order
- (A) cetacea (B) dermoptera
(C) chiroptera (D) insectivora



61512

6

41. Thecodont, heterodont and diphyodont teeth are found in
- (A) birds (B) amphibians
(C) mammals (D) reptiles
42. The study of developmental stages is
- (A) physiology (B) molecular biology
(C) morphology (D) embryology
43. Correct sequence is
- (A) class-order- phylum (B) order-phylum-genus
(C) family-genus-species (D) species-order-family
44. External ear is found in
- (A) reptiles (B) birds
(C) mammals (D) amphibians
45. Which one of the following groups are exclusively marine animals?
- (A) Protozoans (B) Poriferans
(C) Echinoderms (D) Annelids
46. The name of silverfish is
- (A) lepisma (B) cicada
(C) bombyx (D) chiton
47. Diploblastic, acoelomate condition is found in
- (A) round worm (B) planaria
(C) sea anemone (D) earthworm
48. Animals which live at the bottom of the sea are called
- (A) lentic forms (B) benthic forms
(C) lotic forms (D) pelagic forms



61512

7

49. Crocodile farming centre in India is in
- (A) Karnataka (B) Tamil Nadu
(C) Andhra Pradesh (D) Kerala
50. Spicules form endoskeleton of
- (A) rat (B) hydra
(C) frog (D) sponge
51. *Taenia solium* is endoparasite of
- (A) blood of man (B) muscle of man
(C) intestine of man (D) muscles of pig
52. Food of Liver fluke is
- (A) blood (B) bile juice
(C) lymph (D) RBC
53. *Ancylostoma duodenale* causes
- (A) anaemia (B) dysantrpy
(C) filariasis (D) typhoid
54. Elephantiasis disease is transmitted by
- (A) fruit fly (B) tse tse
(C) house fly (D) mosquito
55. Elephant tusk shell is
- (A) limex (B) dentalium
(C) apis (D) nautilus
56. Cockroach mainly excretes
- (A) uric acid (B) ammonia
(C) urea (D) nitrogen



57. Honey bees are related to
- (A) sericulture (B) moriculture
(C) apiculture (D) pisciculture
58. A queen termite is recognized by its
- (A) large head (B) prominent abdomen
(C) long antennae (D) reduced legs
59. Balanoglossus is now considered as
- (A) chordate (B) invertebrate
(C) protochordate (D) urochordate
60. Which fins are modified for gliding in exocoetus?
- (A) dorsal (B) lateral
(C) ventral (D) pectoral
61. The proteins that participate in muscle contraction are
- (A) actin (B) actin and myosin
(C) myosin (D) pectin
62. The term chromosome was first coined by
- (A) waideyer (B) boveri
(C) hofkin (D) benda
63. A chromosome with its Centromere in the middle is called
- (A) submetacentric (B) acentric
(C) metacentric (D) acrocentric
64. Genes for colorblindness in man are located on
- (A) X chromosome only (B) both X and Y chromosome
(C) Y chromosome only (D) either X or Y chromosome



61512

9

65. Kappa particles are present in
- (A) nucleus (B) plasmids
(C) plastid (D) cytoplasm
66. Sex of the child is determined by the
- (A) size of the ovum (B) sex chromosome of mother
(C) sex chromosome of father (D) health of father
67. Karyotype is the name from
- (A) complete set of diploid chromosome
(B) haploid set of chromosome
(C) eukaryotic chromosome
(D) prokaryotypic chromosome
68. Complete breakdown of nuclear membrane takes place in
- (A) telophase (B) metaphase
(C) anaphase (D) cytokinesis
69. Cytochromes are
- (A) hydrogen acceptors (B) electron acceptors
(C) nitrogen acceptors (D) oxygen acceptors
70. Animal cells are without
- (A) plastids (B) lysosomes
(C) vacuoles (D) ribosomes
71. Golgi bodies are concerned with
- (A) excretion (B) secretion
(C) atp synthesis (D) RNA synthesis
72. Lysosomes were discovered by
- (A) white (B) benda
(C) brown (D) de duve



73. Mesozoic era is known as
- (A) age of mammals (B) age of birds
(C) age of fishes (D) age of reptiles
74. The receptor pigment for light in the eyes of land vertebrates is
- (A) chloccruurin (B) pectin
(C) hemoglobin (D) rhodopsin
75. The sympathetic and parasympathetic systems constitute
- (A) reflex action (B) autonomous nervous system
(C) reflex arc (D) conditional reflex
76. Mullerian duct in the female develop into
- (A) uretar (B) oviduct
(C) uterus (D) seminal receptacle
77. Amnion and allontois found in
- (A) fish and frog (B) fowl and fox
(C) fowl and frog (D) fish and fox
78. The egg of frog is
- (A) telolecithal (B) centrolecithal
(C) microlecithal (D) alecithal
79. The functions of allontois in birds are
- (A) nutrition and excretion (B) nutrition and respiration
(C) excretion and protection (D) excretion
80. In which of the animal cotyledonary placenta is found?
- (A) sheep (B) rabbit
(C) mouse (D) elephant
81. Fossil remains of Archaeopteryx were recovered form the lime stones of
- (A) triassic period (B) cambrian period



61512

11

- (C) cretaceous period (D) jurassic period
82. The presence of gill slits in the embryos of all the vertebrates supports the theory of
- (A) biogenesis (B) organic evolution
(C) recapitulation (D) metamorphosis
83. The organs which have similar function but different in its structure and origin are
- (A) homologous (B) catalogous
(C) analogous (D) metalogous
84. Chlofluorocarbon (CFC) cause the threat to the natural concentration of
- (A) carbon dioxide (B) oxygen
(C) ozone (D) nitrogen
85. Both Zebra and African lion live in tropical grass lands but occupy different
- (A) biospheres (B) ecological niches
(C) environments (D) habitats
86. The carrying capacity of population is determined by its
- (A) population growth (B) limiting resource
(C) birth rate (D) death rate
87. In an ecosystem the photosynthetic plants are
- (A) producers (B) predators
(C) decomposers (D) primary consumers
88. The term ecology was coined by
- (A) linnaeus (B) odum
(C) willium (D) heckel
89. What type of forests is found near the equator?
- (A) Deciduous (B) Coniferous
(C) Tropical (D) Grasslands



61512

12

90. Ultimate source of energy in an ecosystem is
- (A) sunlight (B) ATP
(C) glucose (D) protein
91. Noise pollution is measured by
- (A) tons (B) decibels
(C) fathoms (D) kilograms
92. During winter the polar bear
- (A) hibernates (B) remains active
(C) aestivates (D) migrates
93. In a parasite food chain the pyramid of numbers is
- (A) up right (B) irregular
(C) linear (D) horizonatal
94. Archenteron is present in
- (A) blastulas (B) morula
(C) gastrula (D) Both (A) and (C)
95. Prothrombin is related to
- (A) BP (B) oxygen transport
(C) hypertension (D) clotting of blood
96. Middle piece of the mammalian sperm contains
- (A) mitochondria (B) nucleus
(C) acrosome (D) centriole
97. Most of the bones in birds are
- (A) pneumatics (B) porous
(C) solid (D) All of the above
98. Which one of the following has become extinct recently?
- (A) Mammoth (B) Dinosaur
(C) Dodo (D) Archaeopteryx



61512

13

99. Kiwis are now restricted to
- (A) Australia (B) USA
(C) South Africa (D) New Zealand
100. The hormone GnRH is secreted by
- (A) pituitary (B) ovary
(C) adrenal gland (D) hypothalamus
101. Kaziranga national park is known for
- (A) tiger (B) rhinoceros
(C) lion (D) asiatic elephants
102. Gonads are derived from
- (A) ectoderm (B) endoderm
(C) mesoderm (D) all of the above
103. Graafian follicle is found in the ovary of
- (A) rat (B) frog
(C) fish (D) lizard
104. Binomial nomenclature was founded by
- (A) C. Darwin (B) G. Mendel
(C) C. Linnaeus (D) L. Pasteur
105. "Portuguese man of war" is
- (A) Portuguese soldier (B) sponge
(C) insect (D) polymorphic, colonial coelenterate
106. *Pluteus* larva of Echinodermata belongs to the class
- (A) holothuroidea (B) crinoidea
(C) asteroidea (D) echinoidea

107. "Venus flower basket" is an example of the phylum
- (A) rotifera (B) coelenterata
(C) echinodermata (D) porifera
108. Which one of the following is a limbless amphibian?
- (A) Hyla (B) Xenopus
(C) Ichthyophus (D) Alytes
109. Bat belongs to the class
- (A) aves (B) prototheria
(C) mammalia (D) chiroptera
110. Sleeping sickness of Africa is transmitted by
- (A) flea (B) louse
(C) tse-tse fly (D) bed bug
111. Kala azar disease is caused by
- (A) trypanosoma (B) giardia
(C) leishmania (D) monocysts
112. *Obelia* colony is
- (A) monomorphic (B) dimorphic
(C) trimorphic (D) polymorphic
113. To complete life cycle, the tape worm requires
- (A) snail (B) pig
(C) man (D) fish
114. Haemocoel of an insect is actually a
- (A) modified blood vessel (B) true coelom
(C) pseudocoelom (D) schizocoelom



61512

15

115. Study of mouth parts of insects illustrates
- (A) homologous organs (B) adaptive radiation
(C) evolution (D) retrogression
116. A wood boring mollusk is
- (A) *Patella* (B) *Teredo*
(C) *Limax* (D) *Chiton*
117. Indian Pearl Oyster is the common name of
- (A) *Mytilus* (B) *Pecten*
(C) *Pinctada* (D) *Unio*
118. Aristotle's Lantern is found in
- (A) sea-anemone (B) sea-urchin
(C) ophiothrix (D) *Asterias*
119. Notochord is restricted to tail region only in
- (A) hemichordata (B) cephalochordata
(C) tunicata (D) pisces
120. Parental care is exhibited by the fish
- (A) *Hippocampus* (B) *Exocoetus*
(C) *Echeneis* (D) *Eel*
121. Anadromous fishes migrate from
- (A) sea to river (B) river to sea
(C) both ways (D) stream to river
122. Metamorphosis of frog's tadpole is initiated by the gland
- (A) thymus (B) pancreas
(C) adrenal (D) thyroid



61512

16

123. Paedogamy is seen in
- (A) *Plasmodium* (B) *Entamoeba*
(C) *Actinophrys* (D) *Paramecium*
124. The classification of reptiles is based on
- (A) body armature (B) habitat
(C) temporal vacuity (D) reproductive pattern
125. In which one of the following is there one ovary?
- (A) Mammal (B) Reptile
(C) Amphibia (D) Aves
126. Poisonous snakes fangs are modified
- (A) mandibular teeth (B) maxillary teeth
(C) palatine teeth (D) canine
127. In sponges gemmules are
- (A) sexually produced external buds
(B) asexually produced external buds
(C) sexually produced internal buds
(D) asexually produced internal buds
128. The “forerunner” of the thyroid gland of vertebrates is seen in *Amphioxus* as
- (A) velum (B) endostyle
(C) hatchkets pitt (D) brown funnel
129. In which one of the following does one come across retrogressive metamorphosis?
- (A) Amphibian tadpole (B) Ascidian tadpole
(C) Insect caterpillar (D) Crustacean nauplius
130. In the sucker fish, which of the following is modified into sucker?
- (A) Pectoral fin (B) Anterior dorsal fin
(C) Posterior dorsal fin (D) Caudal fin



61512

17

131. Excretory organs of Cockroach
- (A) malpighian tubules (B) solenocytes
(C) nephridia (D) green glands
132. Amoebic dysentery is caused by
- (A) *E. coli* (B) *E. histolytica*
(C) All the species of *Entamoeba* (D) *Entamoeba gingivalis*
133. Sponges are
- (A) diploblastic (B) haploblastic
(C) triploblastic (D) none of the above
134. Acrosome in sperm is secreted by
- (A) endoplasmic reticulum (B) golgi bodies
(C) mitochondria (D) centrioles
135. The cell that is concerned with excretion is
- (A) nematoblast (B) flame cell
(C) chromatophores (D) None of the above
136. The layer from which gametes are formed is
- (A) glandular epithelium (B) germinal epithelium
(C) columnar epithelium (D) follicular epithelium
137. The bone cells are connected with each other through
- (A) haversian canal (B) canaliculi
(C) capillaries (D) matrix
138. The pathogenic organisms of the infected person are destroyed by the action of
- (A) erythrocytes (B) leucocytes
(C) blood platelets (D) all of the above



61512

18

139. The group Amniota includes
- (A) fishes, amphibians and reptiles
 - (B) amphibians, reptiles and birds
 - (C) reptiles, birds and mammals
 - (D) none of the above
140. From the end of the Triassic to the Cretaceous period, the earth was ruled by
- (A) mammals
 - (B) cotylosaurs
 - (C) dinosaurs
 - (D) euryptrids
141. Saliva flows at the sight of the food. This action is
- (A) involuntary
 - (B) voluntary
 - (C) a reflex
 - (D) causative
142. The acid that is secreted in the stomach is
- (A) HCl
 - (B) H₂SO₄
 - (C) H₂CO₃
 - (D) HNO₃
143. Blood clotting requires vitamin
- (A) A
 - (B) B
 - (C) C
 - (D) K
144. Blood clot inside blood vessels is prevented by
- (A) heparin
 - (B) fibrinogen
 - (C) thrombin
 - (D) prothrombin
145. Nissl's granules inside the nerve cells are made up of
- (A) DNA
 - (B) proteins
 - (C) carbohydrates
 - (D) RNA
146. Aphids are
- (A) insect pests
 - (B) fungal pests
 - (C) bacterial pests
 - (D) viral pests



61512

19

147. Sex – linked genes are present in

- (A) autosomes
- (B) X chromosomes
- (C) mitochondrial DNA
- (D) chloroplast DNA

148. The cycle of Ross refers to the

- (A) cyclic changes in the contractile vacuole of Paramecium
- (B) life cycle of trypanosoma
- (C) life cycle of plasmodium in man
- (D) life cycle of plasmodium in mosquito

149. A food web consists of

- (A) single food chain
- (B) two separate linear food chains
- (C) more than one interconnected food chain
- (D) prey-predator food chain

150. The part of the ear involved in balancing is

- (A) utriculus
- (B) cochlea
- (C) sacculus
- (D) semicircular canals
