

VIDYASAGAR UNIVERSITY
MIDNAPORE

COMMON ENTRANCE TEST FOR PG ADMISSION, 2019

Question Booklet No. 2719406

Full Marks : 200

Subject: ZOOLOGY

Question Booklet Series: A

Subject Code No.: 27

Answer all the questions. Each question has the same weightage.

Read the following instructions carefully before you start answering.

INSTRUCTIONS

- The question Booklet is printed in four Series e.g. (A), (B), (C) and (D). The candidate has to indicate the Series of the question booklet in the space provided in the OMR Answer Sheet . For example, if the candidate gets Series (A) booklet, he / she has to indicate on the front side of the OMR Answer Sheet with Black ink ball point pen only as indicated below:



- There are 50 questions inside this question booklet. Immediately after you have been instructed to open this question booklet, ensure that any page / question is not missing / not printed / torn /repeated. In case you find any defect anywhere in the question booklet, immediately get it replaced by the Invigilator.
- Each question carries 4 marks. 1(one) mark will be deducted for each wrong answer(negative marking).
- Write your Form No and put signature in the space provided.
- Before answering, write down the necessary information on the OMR Answer Sheet as per your Application Form and Admit Card in the specific space provided.
- With each question you will find 4 possible answers marked by the letters A, B, C & D. Read each question carefully and find out which answer, according to you, is correct / most appropriate / best. Indicate your answer by darkening the appropriate circle completely in the OMR Answer Sheet corresponding to the question. For marking answers, use black ink ball pen only. If 'B' is the correct answer in a case, mark as below:



- Do not fold or make any stray marks on the OMR Answer Sheet.
- You can use the blank space of the last page for rough work. Do not tear it off from the Question Booklet.
- After the examination has been over, you must submit OMR Answer Sheet to the Invigilator.
- OMR Answer Sheet is designed for computer evaluation. If you do not follow the instructions given above and shown in the OMR Answer Sheet, it may make evaluation by computer difficult. Any resultant loss to the candidate on the above account shall be of the candidate only.
- No candidate shall be allowed to use Mobile phone. Log tables or Calculator of any description in the examination hall / room.

1. Ram-ventilation is related to-
 (A) Fish (B) Bird (C) Amphibia (D) Reptilia
2. Larva of sponge is known as
 (A) Planula larva (B) Trochophore larva
 (C) Glochidium larva (D) Amphiblastula larva
3. Member of Phoronids reproduce asexually by
 (A) Budding (B) Transverse Fission (C) None of these (D) Both (A) and (B)
4. How many types of lenses are present in Transmission Electron Microscope (TEM)?
 (A) 3 (B) 4 (C) 5 (D) 6
5. Human eye acts like a
 (A) Endoscope (B) Camera (C) Telescope (D) Microscope
6. In Gram – staining, iodine is used as a
 (A) Fixative (B) Mordant (C) Solubilizer (D) Stain
7. In birds, the flight muscles are attached to
 (A) Synsacrum (B) Sternum (C) Pygostyle (D) Thoracic mass
8. Which of the following helminth infection is not Zoonosis?
 (A) Echinococcus granulosus (B) Balantidium coli
 (C) Wuchereria bancrofti. (D) Brugia malayi.
9. When a parasite parasitized another parasite is called
 (A) obligatory parasite (B) endoparasite
 (C) hyperparasite (D) temporary parasite
10. Which of the following statement is CORRECT
 (A) helper T-cells express surface CD8 receptor
 (B) cytotoxic T-cells express surface CD4 receptor
 (C) helper T-cells express surface IgG molecule
 (D) cytotoxic T-cells express surface CD8 receptor
11. The phenomenon of selective proliferation of B-cells in response to their interaction with the antigen is called
 (A) Clonal expansion (B) Monoclonal selection
 (C) Clonal proliferation (D) Clonal selection
12. Choose the correct match

Group I	Group II
P. IgA	1. Basophils
Q. IgE	2. δ heavy chain
R. IgG	3. Secretory component
S. IgM	4. Pentamer
	5. Crosses placenta

(A) P-3, Q-1, R-5, S-4 (B) P-3, Q-5, R-2, S-1 (C) P-2, Q-3, R-5, S-4 (D) P-2, Q-1, R-3, S-5
13. The following two organs are example of primary lymphoid organs
 (A) Bone marrow & Thymus (B) Lymph nodes & Thymus
 (C) Spleen & GALT (D) Bone marrow & MALT

14. Which of the following trematode is dieocious?
 (A) *Fasciola* sp. (B) *Schistosoma* sp. (C) *Paragonimus* sp. (D) *Heterophyes* sp.
15. 'Dog Fish' belongs to -
 (A) Squalidae (B) Anabantidae (C) Cichlidae (D) Mastacembelidae
16. What is the name of West Bengal state animal?
 (A) Indian Elephant (*Elephas maximus indicus*)
 (B) Bengal Fox (*Vulpes bengalensis*)
 (C) Fishing Cat (*Prionailurus viverrinus*)
 (D) Gangetic dolphin (*Platanista gangetica*)
17. The phrase "survival of the fittest" coined by
 (A) Herbert Spencer (B) Charles Robert Darwin
 (C) chevalier de Lamarck (D) Hugo de Vries
18. Members of phylum ciliophora sexually reproduce by process of
 (A) Mating (B) Binary fission (C) Conjugation (D) Budding
19. Which of the following organism is a primary consumer?
 (A) An autotroph (B) A horse parasite
 (C) An oak tree parasite (D) A wolf
20. A group of buffalo grazing in grassland. Due to their movement egrets are able to catch and feed on the insect there. State the mode of interaction between the buffalo and egret.
 (A) Protocooperation (B) Mutualism (C) Commensalism (D) Ammensalism
21. Megalopa is the larval form of:
 (A) Echinodermata (B) Annelida (C) Arthropoda (D) Mollusca
22. Which animal is represented on Zoological Survey of India logo
 (A) Indian rhinoceros (*Rhinoceros unicornis*) (B) Indian Gaur (*Bos gaurus*)
 (C) Sambar deer (*Rusa unicolor*) (D) Asiatic lion (*Panthera leo leo*)
23. Sex determination in *Drosophila* depend on
 (A) Xchromosome (B) Autosome
 (C) X chromosome and autosome (D) None of these
24. The supercoiling of DNA is relaxed by
 (A) Topoisomerase (B) DNA polymerase (C) Ligase (D) Helicase
25. Male sex is determined in human by
 (A) sox9 (B) sry (C) both of these (D) none of these
26. The eukaryotic chromatin is activated by
 (A) methylase (B) acetylase (C) deacetylase (D) both acetylase and methylase
27. Autosomal dominant mutation in *Drosophila* is
 (A) Bar eye (B) vestigial wing (C) Scute bristle (D) Curly wing
28. Shine Dalgarno sequence is present on
 (A) Ribosome (B) tRNA (C) mRNA (D) rRNA
29. Which of the following have sperm activating property in sea urchin
 (A) bindin (B) ZP3 (C) calcium (D) resact

30. Which of the following is necessary for organizer formation
 (A) mesoderm (B) dorsal lip of blastopore
 (C) Nieuwkoop center (D) ectoderm
31. Bacterial genomes is prevented by its own endonucleases by
 (A) Methylation at restriction sites
 (B) Immune mechanism
 (C) Nuclease resistance genome
 (D) Are not much effective on bacterial genome
32. In a stable well adapted populations there are frequent increase and decrease in population size around mean value, such population fluctuations are due to-
 (A) Disease and mortality (B) Genetic drift
 (C) Carrying capacity (D) Migration
33. Graft rejection does not involve
 (A) T cells (B) Macrophages
 (C) Erythrocytes (D) Polymorphonuclear leukocytes
34. Amino acid selenocysteine (Sec) is incorporated into polypeptide chain during translation by:
 (A) Charging of Sec into tRNA^{ser} followed by incorporation through serine codon
 (B) Charging of serine into tRNA^{ser} followed by modification of serine into selenocysteine and then incorporation through serine codon
 (C) Charging of Sec into tRNA^{sec} and then incorporation through selenocysteine codon
 (D) Charging of serine into tRNA^{ser} followed by modification of serine into selenocysteine and then incorporation through a specially placed stop codon.
35. A cell undergoing meiosis produces four daughter cells, two of which are aneuploids, while two are haploid. This can occur due to:
 (A) Non-dysjunction during first meiotic division only
 (B) Non-dysjunction during second meiotic division only
 (C) Non-dysjunction during either first or second meiotic division only
 (D) Non-dysjunction during both first and second meiotic division only
36. The pH of blood of a healthy person is maintained at 7.40 ± 0.05 , assuming that this pH is maintained entirely by the bicarbonate buffer (pK_{a1} and pK_{a2} of carbonic acid are 6.1 and 10.3 respectively), the molar ratio of [bicarbonate]/[carbonic acid] in the blood is
 (A) 0.05 (B) 1 (C) 10 (D) 20
37. Prior to transcription, Chromatin changes from an inactive state to an active state by various factors in a stepwise manner. Which one of the following is involved in the initial steps during activation of a chromatin loop?
 (A) High mobility group protein (HMG) 14 (B) Single strand DNA-binding protein
 (C) DNA polymerase III (D) Topoisomerase I
38. Split genes are present in
 (A) All eukaryotes (B) Most of eukaryotes and some eubacteria
 (C) Most of eukaryotes and some archaebacteria (D) All organisms
39. Among the following, which is not an endangered animal-
 (A) Asiatic Lion (*Panthera leo persica*) (B) Asiatic Tiger (*Panthera tigris*)
 (C) Indian wild ass (*Equus hemionus khur*) (D) Rhesus Monkey (*Maccaca mulatta*)

40. In which type of heart is there mixing of oxygenated and deoxygenated blood?
 (A) fish (B) frog (C) crocodile (D) all of these
41. Species that have a disproportionately large impact on the maintenance of an ecosystems biodiversity are referred to as
 (A) exotics (B) primary producer (C) archaea (D) keystone species
42. Biodiversity hot spots are mainly located
 (A) at equator (B) in temperate regions
 (C) between tropics (D) in arctic region.
43. The simple eyes of insects are
 (A) ocelli (B) apposition eyes (C) rhabdoms (D) ommatidia
44. If insufficient PTH is produced, the blood calcium level drops, resulting in _____
 (A) reduced growth in childhood or parathyroid dwarfism
 (B) tetany, where the body shakes from continuous muscle contraction
 (C) osteoporosis
 (D) exophthalmic goitre
45. In conjugation of the ciliate, Paramecium, _____ are exchanged.
 (A) macronuclei (B) heterocysts (C) zoogonia (D) micronuclei
46. When isolated liver cells are combined with non-polar toxins initial processing in the _____ increases the solubility of these compounds as an initial step in their excretion.
 (A) smooth ER (B) Golgi apparatus (C) mitochondrion (D) rough ER
47. In a salt marsh, the meiofauna
 (A) are represented by crabs and lobsters
 (B) include fish
 (C) are very small animals that live between the sand grains
 (D) are the algae
48. Birds with average-sized wings survived a severe storm more successfully than other birds in the same population with longer or shorter wings. This illustrates
 (A) the founder effect (B) stabilizing selection
 (C) artificial selection (D) gene flow
49. Which is the correct order from least to most complex?
 (A) Glucuronate, hyaluronate, proteoglycans, GAG
 (B) Hyaluronate, glucuronate, GAG chains, proteoglycans
 (C) GAG chains, hyaluronate, glucuronate, proteoglycans
 (D) Glucuronate, hyaluronate, GAG chains, proteoglycans
50. Lectotype is -
 (A) Duplicate of holotype
 (B) Specimen described along with holotype
 (C) Specimen cited by author without making one holotype
 (D) Specimen selected from original material for nomenclature type when there is no holotype