

PSG COLLEGE OF ARTS & SCIENCE  
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2024  
(First Semester)

Branch - ZOOLOGY

ANIMAL PHYLOGENY AND PALEONTOLOGY

Time: Three Hours

Maximum:75 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(10 x 1 = 10)

- Which one of the following is not belonging to Mesozoic Era?  
(a) Quaternary (b) Cretaceous (c) Paleogene (d) Neogene
- Most fossils are preserved in which of the processes?  
(a) replacement (b) molds and casts  
(c) compression (d) All of these
- \_\_\_\_\_ period of Molluscs were the oldest representatives of the Molluscan classes  
(a) Ordovician (b) Silurian  
(c) Cambrian (d) Pre Cambian
- By which of the followings the rotifers resemblances with that of Arthropod?  
(a) Segmentation of Appendages  
(b) Cuticularised surface  
(c) The appearance of armed appendages of a crustacean larva.  
(d) All of these
- \_\_\_\_\_ first used the term Mesozoic  
(a) John Phillips (b) Luies Philips  
(c) John Darwin (d) George Philips
- Choose the correct statement from the followings with regards of Amphibian origin.  
(a) Urodeles and apodans from lepospondyls.  
(b) Salamanders and Caecilians were sharing not a common ancestor  
(c) Amphibians have evolved from the earliest Ichthyostega  
(d) Amphibians originated independently from more than one group of rhipidistian fishes
- Which one is correct in respect of Acanthodians?  
(a) The first fishes with jaws  
(b) Spiny small sharks  
(c) Fishes varying from toothless filter-feeders to toothed  
(d) All of these
- Identify the mesozoic mammals, those were the size of a cat and had sharp cusps on the grinding teeth.  
(a) Symmetrodonts (b) Triconodonts  
(c) Pantotheres (d) Docodonts

Cont...

9. National Museum And National Gallery Of Modern Art (NGMA) is located in \_\_\_\_\_  
 (a) Lucknow (b) Secunderabad  
 (c) New Delhi (d) Mussouri
10. In \_\_\_\_\_ the first Open-air museum was opened.  
 (a) Scatland (b) Osaka-Kobe  
 (c) Toronto (d) Scandinavia

**SECTION - B (35 Marks)**

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 7 = 35)

11. a) Write an account on Significance of Metamerism.  
 OR  
 b) Give a outline picture of evolution of Protozoa.
12. a) Give the evolutionary significances of the Rotifer with other invertebrate group.  
 OR  
 b) Discuss briefly about the Arthropod fossils of Cambrian period in pertucular.
13. a) Give an account on the important evolutionary significances of Agnatha.  
 OR  
 b) Write an account on the interesting facts *Seymoria*.
14. a) Give a brief note on Hesperornis.  
 OR  
 b) Bring out the features of Mammalia found in the Therapsids.
15. a) Enumerate the various methods and protocols to preserve specimens in the museum.  
 OR  
 b) Write a brief account on Maritime Museums.

**SECTION -C (30 Marks)**

Answer ANY THREE questions

ALL questions carry EQUAL Marks

(3 x 10 = 30)

16. Write an essay on Phanerozoic Eon with its Geolocal significances.
17. Give an elaborate detail on the Phylogenetic tree of Mollusca to explain about the similarity in origin.
18. Discuss about the anatomical changes taken place in the ancestral amphibians for the transformation into land adapted reptiles.
19. Evolution of man is not only an achievement of the past but also a promise for the future – Justify this statement with your conceptual content.
20. Explain about the Indian government's museum reform agenda to upgrade human resources in Indian museums.