

## M.Sc Integ in App Geo Sem-4 Examination

AGL : 209

Palaeontology

April 2022

Time : 2-00 Hours]

[Max. Marks : 50

Instructions : All questions in **Section –I** carry equal marks.  
 Attempt any **Three** questions in **Section-I**.  
 Questions I in **Section-II** is **COMPULSORY**.

## Section-i

Q-I	A. Explain the concepts of organic evolution. Also describe in detail the major evidences pointing towards evolution	7
	B Explain the concepts of taxonomy, taxonomic hierarchy and relation between taxonomy and fossil identification	7
Q-II	A Define mass extinction and describe in detail all the major punctuated events through the geological period	7
	B Define species concept, name the four (4) species concepts and describe in detail morphological species concept	7
Q-III	A Describe the major morphological aspects and stratigraphic significance of pelecypoda.	7
	B Providing reasons explain why fossils tend to be more preserved in sedimentary rocks and on the basis of their distribution, occurrence and characteristics describe the six (6) types of fossils	7
Q-IV	A What are ammonites and based on the shell morphology describe the eight (8) distinct types	7
	B Explain the significance of taxonomic studies and describe in detail typological species concept	7
Q-V	A Write a note on the major morphological characteristics, geological history and stratigraphic significance of Brachiopods	7
	B Explain in detail the 10 biogeographic zones India	7
Q-VI	A Write a note on the significance of Mesozoic period	7
	B Explain animal classification based on the type of teeth and neck, type of eggs, structure, reproduction, food consumption, footprints and hip pattern	7
Q-VII	A Write a note on vertebrate evolution and its diversity with time	7
	B Write a note on taphonomy and describe petrification process in detail	7
Q-VIII	A Write a note on hominin evolution and diversity	7
	B Explain what is migration and dispersal in detail. Also explain its significance	7

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## Section II

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|-----|------|---|
| QIX | MCQs | 8 |
|-----|------|---|
- 1) Erosion of hard tissues due to sandblasting effects of suspended sediment particles is called \_\_\_\_\_
    - a) dissolution
    - b) fragmentation
    - c) abrasion
    - d) disarticulation
  
  - 2) \_\_\_\_\_ is the principal mineral component of the skeletons of some sponges and micro-organisms such as diatoms and radiolarians.
    - a) calcite
    - b) opal
    - c) quartz
    - d) garnet
  
  - 3) Skeletal remains that are composed of stable minerals like \_\_\_\_\_ can be preserved without significant change in chemical makeup or internal structure
    - a) Calcium nitride
    - b) Calcium sulphate
    - c) Calcium chloride
    - d) Calcium phosphate
  
  - 4) The oldest known aragonite in the rock record is of \_\_\_\_\_
    - a) Late triassic age
    - b) Late mesozoic age
    - c) Late Palaeozoic age
    - d) Late cenozoic age
  
  - 5) \_\_\_\_\_ are the oldest lineage of mammals
    - a) Marsupials
    - b) Monotremes
    - c) Diatremes
    - d) Eutherians
  
  - 6) Phylogenetic tree shows that all primates are divided into \_\_\_\_\_ groups
    - a) 3
    - b) 4
    - c) 2
    - d) 5
  
  - 7) Many organisms employ other organisms for long distance transport, which is known as \_\_\_\_\_
    - a) Parasitism
    - b) Migration
    - c) Phoresy
    - d) Filtering
  
  - 8) \_\_\_\_\_ is a body of rock located between the last appearance of a taxon and the first appearance of another taxon
    - a) Partial range biozone
    - b) Concurrent range biozone
    - c) Interval biozone
    - d) Taxon range biozone