

(4)

Ex./FG/1/X/40/2017

7. Write a short note on the different life habitat of brachiopods. 5

OR

Write briefly about the different life habitat of bivalves.

— X —

BACHELOR OF SCIENCE EXAMINATION, 2017

(Final Year, 6th Semester)

GEOLOGICAL SCIENCES

Paper : X

Palaeontology

Time : Two hours

Full Marks : 50

Use separate Answer scripts for each part.

PART - I (30 marks)

1. Answer any **five** questions. Give appropriate sketch as required : 2x5=10
- (a) Describe the characteristic morphology of the most primitive land plant.
 - (b) Evolution of root structure in Division Lycophyta.
 - (c) Discuss the specific morphological features in Order Equisetale those helped their survival across K-T boundary.
 - (d) What is a 'sorus' structure ? How did this structure modified towards seed structure ?
 - (e) Why do Order Osmundale put under a separate Class ?

(Turn Over)

(2)

- (f) Order Glossopteridale had a typical germination structure—discuss.
- (g) 'Cycas of dioecious'—explain with respect to germination structure.
- (h) Enumerate with the neat sketch the theory of monophyletic evolution of Orders Cycadale and Cycadeoidale.

2. Write short notes on (any **two**): 2.5x2=5

- (a) Genus Baragwanathia.
- (b) Germination in Genus Pinus.
- (c) Evolution of leaf structure.

3. Answer any two questions. 7.5x2=15

- (a) What are the general characteristics of super class *Pisces*? What are the major differences between *Actinopterygii* and *Crossopterygii* as established from fossil records? Discuss briefly about *Cosmoid* scale and *Gamoid* scale. 2+4+1.5=7.5
- (b) 'Unidirectional evolution is not always established in the history of vertebrates'—Discuss in the light of fossil record of labyrinthodont amphibians. On what aspects reptiles are considered more developed with respect to amphibians? 4.5+3=7.5

(3)

- (c) Arrange chronologically of the following events and discuss their significance. 1.5+4x1.5=7.5
 - (i) development of placenta
 - (ii) development of jaws
 - (iii) development of lung
 - (iv) development of amnion.

PART - II (20 marks)

4. Write a short note on the types of fossil preservation? 4

OR

Discuss briefly about the different taphonomic processes.

5. Write briefly about the recognition of sexual dimorphism in ammonites 4

OR

Define iterative evolution? Explain with an example.

6. Briefly discuss the response of Class Cephalopoda to Marine Mesozoic Revolution. 7

OR

Discuss briefly the response of Class Gastropoda to Marine Mesozoic Revolution.

(Turn Over)