

**FINAL BACHELOR OF SCIENCE EXAMINATION, 2019
(3rd Year, 1st Semester)**

GEOLOGICAL SCIENCES

Paleontology

Paper - X

Time : Two hours

Full Marks : 50

Use a separate answer script for each group.

GROUP - A (25 marks)

1. Answer any *two* questions :

- (a) What are the basis to divide the super class *Pisces* into different classes ? Discuss the probable evolutionary changes that has taken place from primitive class to the advanced class. Why is *Acanthodians* considered as important fossil record to justify the probability ? 2+2+4
- (b) What is '*Ichthyostegid*'—fish or amphibian ? What were the advantages of amphibians that enabled them to venture into land ? Discuss briefly the group of amphibians that adopted aquatic habit reverting amphibian evolution. 1+4+3

(Turn over)

(2)

(c) On what basis reptiles are considered 'more evolved' with respect to amphibians evolutionary history? How does isotope geochemistry help to predict mode of life in the fossilized remains of the reptilian-vertebrates. 4+4

2. Write notes on (any *three*) : 3x3=9

(a) Difference between *Crossopterygii* and *Actinopterygii*.

(b) Chondrostei and Teleostei.

(c) Temporal opening and subclass *Synapsida*.

(d) Characteristics of mammals and subclass *Metatheria*.

(e) Evolutionary trend of *mammalian* dentition during Mesozoic.

GROUP - B

Q.no. 3 is compulsory and Answer any *two* from the rest.

3. Elucidate the applications of Munier Chalmas notation of the dentition of pelecypods with neat diagrams. 5

OR

(3)

Write a short note on Lower Gondwana flora and its significance. 5

4. What is pallial sinus in a bivalve? Discuss the habitat of bivalves having pallial sinus. 10

5. What is iterative evolution? Give examples from cephalopods. 10

6. Discuss '*Dicroidium*' and its age significance in terms of ape. 10

7. Illustrate the echinoid test with a sketch and comment on its ecology and geological history. 10

8. Discuss the modes of fossilization of an organism. 10

— X —

Q. No. 5

EXAMINATION ROLL NO.

Ref. EX:UG/Sc/CORE-7/25/2019

