

SEMESTER V

MAJOR COURSE – MJ 10

PALEONTOLOGY

Full Marks: 75 Time: 3 Hours

GROUP – A

Q1. Choose the correct answer:

1. The process by which organic remains become preserved as fossils is called: **(1 mark)**
A. Erosion B. Fossilisation C. Weathering D. Diagenesis
2. Which concept is most useful for defining a biological species in palaeontology? **(1 mark)**
A. Rock cycle B. Species concept C. Plate cycle D. Facies law
3. Trilobites belong to which major fossil group? **(1 mark)**
A. Arthropoda B. Mollusca C. Brachiopoda D. Chordata
4. The study of trace fossils is known as: **(1 mark)**
A. Palynology B. Ichnology C. Petrology D. Mineralogy
5. A fossil species used for correlation of widely separated strata is called: **(1 mark)**
A. Index fossil B. Living fossil C. Trace fossil D. Reworked fossil

Q2. Explain the nature and importance of the fossil record, with suitable examples. (5 marks)

Q3. What is an index fossil? State the main characteristics that make a fossil useful for biostratigraphic correlation. (5 marks)

GROUP – B

Answer any four questions.

Q4. Describe the major processes of fossilisation and the different modes of fossil preservation. (15 marks)

Q5. Explain the concept of species in palaeontology and discuss the theory of organic evolution. (15 marks)

Q6. Give a detailed account of the morphology and geological history of Trilobites and Brachiopods. (15 marks)

Q7. Discuss the evolution of the horse and explain its significance in understanding evolutionary trends and intercontinental migration. (15 marks)

Q8. Explain the applications of fossils in stratigraphy, including biostratigraphy, biozones, index fossils and correlation. (15 marks)

Q9. Discuss palaeoenvironmental analysis, palaeobiogeography and palaeoecology with reference to fossils. Add a note on microfossils and their importance. (15 marks)