

THIRD SEMESTER UG DEGREE EXAMINATION, NOVEMBER 2025

(FYUGP)

CC24UGEL3MN202 - HISTORICAL GEOLOGY

(Geology - Minor Course)

(2024 Admission - Regular)

Time: 2.0 Hours

Maximum: 70 Marks

Credit: 4

Part A (Short answer questions)Answer ***all*** questions. Each question carries 3 marks.

1. Describe flora. [Level:1] [CO1]
2. Explain gastroliths. [Level:2] [CO2]
3. Infer role of fossils play in determining the relative age of rock layers. [Level:2] [CO1]
4. State the Principle of Lateral Continuity. [Level:1] [CO3]
5. State the Law of Original Horizontality. [Level:1] [CO3]
6. Summarize how can fossils provide evidence for the theory of evolution? [Level:2] [CO1]
7. Assess which is considered the largest mass extinction event in Earth's history? [Level:5] [CO5]
8. Define the term assemblage zone [Level:1] [CO6]
9. Describe two major causes proposed for the Permian–Triassic extinction. [Level:2] [CO5]
10. Define Glossopteris. [Level:1] [CO5]

(Ceiling: 24 Marks)**Part B (Paragraph questions/Problem)**Answer ***all*** questions. Each question carries 6 marks.

11. Define palaeontology and its branches. [Level:2] [CO1]
12. Compare leaching and impregnation. [Level:2] [CO1]
13. Explain how does uniformitarianism help in interpreting sedimentary structures (like cross-bedding or ripple marks)? [Level:2] [CO3]
14. Prioritize the role of marine microfossils play in petroleum exploration. [Level:5] [CO2]

15. Explain how homotaxis helps in correlating strata when lithological similarity is absent. [Level:2] [CO4]

16. Compare and contrast Supergroup, Group, Formation, Member, and Bed in terms of definition, scale, and usage. [Level:4] [CO6]

17. Explain Global Boundary Stratotype Section and Points (GSSPs) important in chronostratigraphy? [Level:2] [CO6]

18. Assess the example. A sedimentary sequence contains ammonite fossils. How could these be used for dating and correlation? [Level:5] [CO6]

(Ceiling: 36 Marks)

Part C (Essay questions)

Answer any *one* question. The question carries 10 marks.

19. Discuss the advantages and disadvantages of using physical criteria vs fossil criteria in correlation. [Level:2] [CO4]

20. Discuss the importance of facies analysis in reconstructing past depositional environments. [Level:2] [CO4]

(1 × 10 = 10 Marks)
