

November 2025
M.Sc.
First Semester
CORE – 02
GEOLOGY
Course Code: MGLC 1.21
(Structural Geology & Geodynamics)

Total Mark: 70

Pass Mark: 28

Time: 3 hours

Answer five questions, taking one from each unit.

UNIT-I

1. Explain the concept of strain markers and the methods used for strain measurements in naturally deformed rocks. 14
2. Explain the behaviour of rocks under stress. 14

UNIT-II

3. Explain the origin and significance of planar and linear fabrics in deformed rocks. 14
4. Write a note on each of the following: 7×2=14
 - (a) Causes and dynamics of faulting
 - (b) Π and β diagrams

UNIT-III

5. Discuss the major phase transitions and seismic discontinuities occurring in the interior of the earth. 14
6. Write a note on each of the following: 7×2=14
 - (a) Mechanism of plate motion
 - (b) Geological and palaeontological evidence of continental drift

UNIT-IV

7. Explain how magnetic polarity reversals provide evidence for sea floor spreading. 14

8. Write a note on each of the following: 7×2=14
(a) Origin of rock magnetism
(b) Heat flow patterns at MOR.

UNIT-V

9. Explain the structure and origin of the Himalayas. 14
10. Write a note on each of the following: 7×2=14
(a) Tectonic evolution of the Singhbhum Craton
(b) Tectonic evolution of the Bastar Craton
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