

**2023**  
**M.Sc.**  
**First Semester**  
CORE – 02  
**GEOLOGY**  
*Course Code: MGLC 1.21*  
(Structural Geology & Geodynamics)

*Total Mark: 70*  
*Time: 3 hours*

*Pass Mark: 28*

*Answer five questions, taking one from each unit.*

**UNIT-I**

1. Discuss strain markers and the methods of strain measurements in naturally deformed rocks. 14
  
2. Write notes on *any two* of the following: 7×2=14
  - (a) Differential and effective stress
  - (b) Two-dimensional stress analysis
  - (c) Principal axes of strain

**UNIT-II**

3. Explain stereographic projections for presenting different types of fabrics with suitable illustration. 14
  
4. Write notes on the following: 7×2=14
  - (a)  $\pi$  and  $\beta$  diagram
  - (b) Causes and dynamics of faulting

**UNIT-III**

5. Illustrate the layered structure of the earth and describe in detail the thickness of various layers, their composition and physical properties. 14

6. Write notes on the following: 7×2=14  
(a) Evidences in support of continental drift theory  
(b) Edge force mechanism of plate motion

#### UNIT-IV

7. Discuss the origin of magnetism in rocks. Explain the different types of magnetism based on magnetic susceptibility. 14
8. Write notes on the following: 7×2=14  
(a) Gravity and magnetic anomalies of the ocean floor  
(b) Types of remnant magnetism in rocks

#### UNIT-V

9. Discuss in detail the origin and structure of the Himalayas. 14
10. Write notes on the following: 7×2=14  
(a) Bastar craton  
(b) Bundelkhand craton
-