

April 2025
B.A./B.Sc.
Fourth Semester
CORE – 8
GEOLOGY
Course Code: GLC 4.11
(Metamorphic Petrology)

Total Mark: 70
Time: 3 hours

Pass Mark: 28

Answer five questions, taking one from each unit.

UNIT-I

1. Illustrate contact metamorphism with a suitable diagram. 14
2. Write a short note on regional and dynamic metamorphism with suitable examples. 7+7=14

UNIT-II

3. Define texture. Describe briefly the different types of metamorphic textures. 2+12=14
4. Write notes on the following: 7×2=14
 - (a) ACF diagram
 - (b) Metamorphic grade

UNIT-III

5. Elaborate on regional metamorphism in relation to plate tectonics. 14
6. Write notes on the following: 7×2=14
 - (a) Use of porphyroblast in deciphering the time relation between deformation and metamorphism
 - (b) Prograde metamorphism

UNIT-IV

7. Define migmatites and describe their types. Discuss the process of anatexis and explain its role in the formation of migmatites. 7+7=14

8. Write notes on the following: 7×2=14
(a) Types of metasomatism
(b) Fluids in metamorphism

UNIT-V

9. Write notes on the following: 7×2=14
(a) Gneisses
(b) Marble
10. Write an elaborate note on charnockites. 14
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