

2023
B.A./B.Sc.
First Semester
CORE – 2
GEOLOGY
Course Code: GLC 1.21
(Mineral Science)

Total Mark: 70
Time: 3 hours

Pass Mark: 28

Answer five questions, taking one from each unit.

UNIT-I

1. Define open and closed forms. Explain the common crystal forms with suitable illustrations. 14
2. Write notes on the following: 7×2=14
 - (a) Crystal morphology
 - (b) Miller indices

UNIT-II

3. Discuss in detail the normal class of tetragonal crystal system with suitable diagrams. 14
4. Write notes on the following: 7×2=14
 - (a) Crystallographic axes of hexagonal crystal system
 - (b) Triclinic crystal system

UNIT-III

5. Give an account on the structural classification of silicate minerals with examples and neat sketches. 14
6. Write notes on the following: 7×2=14
 - (a) Solid solution
 - (b) Mineral hardness and cleavage

UNIT-IV

7. Discuss the chemistry, classification, physical and optical properties of garnet group of minerals. 14
8. Write notes on the following: $7 \times 2 = 14$
- (a) Alumino silicate group of minerals
 - (c) Mica group of minerals

UNIT-V

9. Describe the main features of a petrographic microscope with a labelled diagram. 14
10. Write notes on the following: $7 \times 2 = 14$
- (a) Isotropic and anisotropic minerals
 - (b) Interference colours
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