

Model Question Paper SET3
Paper : MJ3 (MINERALOGY AND CRYSTALLOGRAPHY)
Subject : Geology

Full Marks: 75

Time: 3 hours

Group A

(Short answer-type compulsory questions)

Q1. Fill in the blanks: [5x1=5]

- a) The smallest repeating unit of a crystal is called the _____.
- b) Quartz is composed mainly of _____
- c) Ordinary light vibrates in _____ directions.
- d) Pleochroism is observed in _____ polarized light.
- e) Muscovite belongs to the _____ group.

Q2. Explain isotropic and anisotropic minerals. [5]

Q3. Write all the crystal systems with their characteristic symmetric element. [5]

Group B [4 X 15]

Answer any four

(Subjective/ Descriptive questions)

Q4. Describe in detail about the optical properties used in the identification of minerals

Q5. Describe the elements of crystal symmetry with digram.

Q6. Explain the concept of parameter and miller indices with diagram.

Q7. Describe the physical, chemical, and optical properties of Mica group

Q8. Describe the physical, chemical, and optical properties of feldspar group

Q9. Write short note on any 3 of the following:

- i. HCP
- ii. Phyllosilicates
- iii. Sorosilicate
- iv. Forms of crystals
- v. Stereographic projection

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