

Model Question Paper SET 2
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 angle between two crystal axes is called the _____ angle.
- b) The hardness of quartz on Mohs scale is _____.
- c) has a hardness of 6 on Mohs scale.
- d) Interference colours are observed under _____ nicols.
- e) Quartz has _____ cleavage.

Q2. Describe the physical properties used in the identification of minerals. [5]

Q3. Define Crystal and its elements. Describe the law of constancy of interfacial angles. [5]

Group B [4 X 15]

Answer any four

(Subjective/ Descriptive questions)

Q4. Classify crystals into different systems based on their crystallographic axis.

Q5. Discuss silicate structures with diagram.

Q6. Describe the working of petrological microscope with the help of diagram of its parts.

Q7. Explain isotropic and anisotropic minerals with suitable diagram.

Q8. Describe the physical, chemical, and optical properties of olivine.

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

- i. CCP structures
- ii. Extinction angle
- iii. Interference colour
- iv. Mohs scale of hardness
- v. Habits of crystals.

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