

Model Question Paper SET1
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 Hexagonal system has _____ crystallographic axes.
- b) CCP stands for _____ Cubic Packing.
- c) Plane-polarized light vibrates in _____ direction.
- d) Isotropic minerals remain _____ under crossed nicols.
- e) Amphiboles have cleavage at approximately _____° and 124°.

Q2. Explain Crystal parameters and indices, . [5]

Q3. Discuss the various symmetry elements present in crystals. [5]

Group B [4 X 15]

Answer any four

(Subjective/ Descriptive questions)

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

Q5. write a note on mineral and its classification.

Q6. Discuss different crystallographic axis.

Q7. Describe the physical, chemical, and optical properties of quartz.

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

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

- i. Inosilicate structure
- ii. Cyclosilicate structure.
- iii. Tectosilicate structure.
- iv. Law of interfacial angle.
- v. Composition of Earth

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