

M.Sc.(Geology) (CBCS Pattern) Semester - I
PSCGEOT01 - Paper-I : Mineralogy & Crystallography

P. Pages : 2

Time : Three Hours



GUG/S/23/11162

Max. Marks : 80

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- Notes : 1. All questions are compulsory and carry equal marks.
2. Draw a neat diagrams wherever necessary.

1. Describe X-ray crystallography and Bragg's equation.

OR

Write a note on the followings.

- Isotropic and Anisotropic
 - EPMA
 - Reflection and Refraction
 - Becke line effect
2. Give a brief account of general formulae, classification, atomic structure and paragenesis of calcite group.

OR

Write a short note on the followings.

- Bonding in Minerals
 - Isomorphism
 - Inosilicate
 - Co-ordination and co-ordination number
3. Give a brief account of general formulae, classification and physical properties of feldspar group of minerals.

OR

Write a note on the followings.

- Physical properties of Beryl and Tourmaline.
- Classification of Pyroxene group
- Aluminosilicate.
- Zeolite

4. What is crystal? Describe crystalline solid and their formation.

OR

Write a short note on the followings.

- a) Principle of crystallography.
- b) Lettering and crystallographic axes.
- c) Axial Ratio
- d) Nets and Lattices

5. Write a short note on the followings.

- a) Relief.
- b) Refractive Index
- c) Name any two example of phyllosilicate minerals.
- d) Polymorphism.
- e) Name any four member of mica group.
- f) Talc.
- g) Twining
- h) Miller-indices.
