

Roll No. :

Total No. of Questions : 11]

[Total No. of Printed Pages : 3

BPMS-518

M.Sc. (Previous) Examination, 2023

GEOLOGY

Paper - II

(Geochemistry, Crystallography and Mineralogy)

Time : 3 Hours]

[Maximum Marks : 75

Section-A

(Marks : 2 × 10 = 20)

Note :- Answer all *ten* questions (Answer limit **50** words). Each question carries **2** marks.

Section-B

(Marks : 5 × 5 = 25)

Note :- Answer all *five* questions. Each question has internal choice (Answer limit **200** words). Each question carries **5** marks.

Section-C

(Marks : 10 × 3 = 30)

Note :- Answer any *three* questions out of five (Answer limit **500** words). Each question carries **10** marks.

Section-A

1. (i) Define Isotope.

(ii) What are Atmophile Elements ?

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- (iii) Define Crystal Growth.
- (iv) What is Space Lattice ?
- (v) What is Optic Sign ?
- (vi) Name *two* carbonate minerals with their chemical composition.
- (vii) What is Mineral Form ?
- (viii) Name the minerals of olivine group with their chemical composition.
- (ix) What are Gem Minerals ?
- (x) Write the cryptocrystalline varieties of Silica.

Section-B

2. Discuss Geochemical Anomaly.

Or

Discuss about Oxygen Isotopes.

3. Discuss Stereographic Projection.

Or

Discuss about X-ray Crystallography.

4. Discuss about Interference Figure.

Or

Discuss about Break Compensator.

5. Discuss chemistry, mode of occurrence and origin of minerals of garnet group.

Or

Discuss about Cyclo-silicates.

6. Discuss about optical and physical properties of minerals of Felspar Group.

Or

Discuss about optical and physical properties of minerals of Mica Group.

Section–C

7. Describe Geochemical classification of elements.
8. Discuss the axes, class, symmetry and forms of Hexagonal System.
9. Describe the systematic mineralogy of Sulphide Groups.
10. Discuss the chemical composition, physical and optical properties and mode of occurrences of minerals amphibole group.
11. Discuss the physical and optical properties of minerals of Felspathoid Group.