

M.Sc. (Geology) First Semester (Old Course)
0170 - Metamorphic Petrology & Precambrian Geology Paper-III

P. Pages : 1

Time : Three Hours



GUG/W/18/2176

Max. Marks : 80

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

1. Give an account of various factors controlling metamorphism.

OR

Write notes on the following:

- a) Regional Metamorphism
- b) Contact Metamorphism
- c) Hydrothermal Metamorphism
- d) Impact Metamorphism

2. Discuss Metamorphic Facies in detail.

OR

Write notes on the following:

- a) Metamorphic zones
- b) Metamorphic Differentiation
- c) Metasomatism
- d) Granitization

3. Discuss in detail the concept of Geothermometry and Geobarometry quoting suitable examples.

OR

Write notes on the following:

- a) Gibbs free energy
- b) Isograds
- c) Fugacity of metamorphic reactions
- d) Petrogenetic grids

4. Write in details about Archaean Cratons.

OR

Write notes on the following:

- a) Proterozoic Basins of India
- b) Precambrian Microplates in India
- c) Archaean Granite- Greenstone belts
- d) Precambrian mobile belts

5. Write short notes on the following:

- a) Protoliths
- b) Transient Geotherm
- c) Anatexis
- d) Migmatites
- e) ACF diagram
- f) AKF diagram
- g) Major Orogenies in Precambrian
- h) Mineral resources of Precambrian Belts in India
