

M.Sc.(Geology) (C.B.C.S. Pattern) (New Course) Sem-I
PSCGEOT03 - Paper-III : Metamorphic Petrology & Geological Mapping

P. Pages : 2

Time : Three Hours



GUG/S/19/11164

Max. Marks : 80

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

1. Describe in detail factors controlling metamorphism.

OR

Write notes on the following.

- a) Contact metamorphism.
- b) Hydrothermal metamorphism.
- c) Protolith types.
- d) Retrograde metamorphism.

2. Describe in detail metamorphic facies.

OR

Write notes on the following.

- a) Granitization.
- b) Metamorphic differentiation.
- c) Tectonic controls of metamorphism.
- d) Metasomatism.

3. Describe in detail mineralogical phase rule for closed systems.

OR

Write notes on the following.

- a) ACF diagram.
- b) AFM diagram.
- c) Fugacity.
- d) Gibb's free energy.

4. Describe in detailed mapping methods in metamorphic terrains.

OR

Write notes on the following.

- a) Base maps.
- b) Topographic maps.
- c) Objective of geological mapping.
- d) Precision required in geological mapping.

5. Write short notes on the following.

- a) Porphyroblastic texture.
- b) Xenolith.
- c) Metamorphic zones.
- d) Eclogite.
- e) Enthalpy.
- f) Activity of metamorphic reactions.
- g) Types of geological maps.
- h) Types of geological sections.
