

M.Sc. (Geology) (CBCS Pattern) First Semester (New Course)  
**PSCGEOT03 - Metamorphic Petrology & Geological Mapping Paper-III**

P. Pages : 1

Time : Three Hours



GUG/W/18/11164

Max. Marks : 80

- 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 short notes on :-

- |                             |                         |
|-----------------------------|-------------------------|
| a) Porphyroblastic textures | b) Dynamic metamorphism |
| c) Impact metamorphism      | d) Transient geotherm   |

2. Describe in detail regional metamorphism of mafic rocks.

**OR**

Write short notes on:-

- |                                |                       |
|--------------------------------|-----------------------|
| a) Metamorphic differentiation | b) Origin of granites |
| c) Paired metamorphic belts    | d) Metamorphic facies |

3. Describe in detail the Mineralogical phase rule for closed and open systems.

**OR**

Write short notes on:-

- |                |                                   |
|----------------|-----------------------------------|
| a) AKF diagram | b) Fugacity                       |
| c) ACF diagram | d) Isograds and reaction isograds |

4. Describe in detail objectives of geological mapping.

**OR**

Write short notes on:-

- Topographic maps
- Types of geological maps
- Mapping methods in sedimentary terrains.
- Principles of geological mapping

5. Write short notes:-

- Ocean floor metamorphism
- Regional Metamorphism
- Metamorphic zones
- Granulite
- Entropy
- Enthalpy
- Base maps
- Geological symbols in maps

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