

M.Sc.(Geology) (CBCS Pattern) Semester - I
PSCGEOT02 - Paper-II : Igneous Petrology

P. Pages : 2

Time : Three Hours



GUG/S/23/11163

Max. Marks : 80

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

1. What is mantle? Describe the brief petrology of mantle metasomatism.

OR

Write note on the following.

- a) MORB
- b) Plume magmatism.
- c) Continental margin
- d) Layered complex

2. What is magmatic crystallization? Describe in brief crystallization binary magmatic system.

OR

Write note on the following.

- a) AFC process
- b) Assimilation and liquid immiscibility.
- c) Batch melting
- d) Rayleigh crystallization

3. Describe the various structure found in igneous rocks.

OR

Write note on the following.

- a) TAS
- b) Mg number
- c) Alternative index
- d) Saturation index

4. Describe petrology and petrogenesis of ultramafic rocks.

OR

Write note on the following.

- a) Basalt.
- b) Pegmalite.
- c) Lamprophyre.
- d) Charnockite.

5. Write very short notes on the following.

- a) Island arcs.
- b) Hot Spot.
- c) Equilibrium crystallization.
- d) Dynamic Melting.
- e) Lever rule.
- f) AFM
- g) Weight norm.
- h) Anorthosite.
