

Roll No.....

Total No. of Printed Pages : 4

Code No. : B02/106

Second Semester Online Examination, May-June, 2022

M. Sc. GEOLOGY

Paper I

IGNEOUS PETROLOGY

Time : Three Hours]

[Maximum Marks : 80

Note : Part A and B of each question in each unit consist of 'very short answer type questions' which are to be answered in one or two sentences. Part C 'Short answer type' and D 'Long answer type' of each question should be answered within the word limit mentioned.

UNIT-I

1. (A) What is incongruent melting ? 2
(B) What is Laccolith ? 2
(C) Describe Albite-Anorthite system.

(Word limit 200-250) 4

OR

Write the petrogenetic significance of Fosterite-Diopside-Silica System.

- (D) Write a note on the textures in igneous rocks. *(Word limit 400-450) 12*

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OR

Describe Albite-Anorthite-Diopside system and add a petrogenetic significance of this system.

UNIT-II

2. (A) What is primary magma ? 2
(B) What are the factors affecting the evolution of magma. 2
(C) Write a note on magma mixing.

(Word limit 200-250) 4

OR

Write a note on mantle mineralogy.

- (D) Write a detailed note on magmatic differentiation processes.

(Word limit 400-450) 12

OR

Which are the different models of partial melting of mantle. Write a note on the trace element behaviour during partial melting of mantle.

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UNIT-III

3. (A) What is tholeiitic basalt ? **2**
(B) Write a note on the classification of lamproite. **2**
(C) Write a note on ophiolite.

(Word limit 200-250) 4

OR

Write a note on the geochemistry of Komatiite.

- (D) Write a detailed note on Kimberlite.

(Word limit 400-450) 12

OR

Write a detailed note on classification of Granite giving special reference to tectonic setting.

UNIT-IV

4. (A) Write a note on the mineralogy of carbonatite. **2**
(B) Write a note on the classification of lamprophyte. **2**
(C) Write a note on the petrogenesis of carbonatite. *(Word limit 200-250) 4*

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OR

Write a note on the rock types found in island arc settings.

- (D) Write a note on continental alkaline magmatism. *(word limit 400-450) 12*

OR

Write a note on generation of magma with reference to plate tectonics.

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