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(April)

GEOLOGY

(Elective/Honours)

SECOND PAPER

(Petrology)

Marks : 56

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

Answer four questions, selecting one from each Unit

GROUP—A

(Igneons Petrology)

UNIT—I

1. (a) Write a note on the mode of occurrence of igneous rocks. 3
- (b) Give an account of Bowen's reaction series. 5
- (c) Give the IUGS classification of plutonic igneous rocks. 6

(2)

2. (a) Define magma. 2
(b) List the different processes of magmatic differentiation. Describe any two processes of magmatic differentiation. $4+(4 \times 2)=12$

UNIT—II

3. Describe with the help of neat sketches the different textures of igneous rocks. 14
4. Write petrographic notes on any four of the following : $3\frac{1}{2} \times 4=14$
(a) Granite
(b) Basalt
(c) Syenite
(d) Gabbro
(e) Dolerite
(f) Diorite

GROUP—B

(Sedimentary and Metamorphic Petrology)

UNIT—III

5. (a) Describe with neat sketches the textural elements of clastic sedimentary rocks. 8
(b) Write a brief note on the diagenetic process in sedimentary rocks. 6

D16/1445

(Continued)

(3)

6. (a) Write brief notes on any four common mechanical structures of sedimentary rocks. Draw neat sketches. $2 \times 4=8$
(b) How does a wacke differ from an arenite? 2
(c) Write a brief note on the various components of limestone. 4

UNIT—IV

7. Define metamorphism. List the different factors of metamorphism. Write briefly on the different types of metamorphism. $2+2+10=14$
8. Write brief notes on any four of the following : $3\frac{1}{2} \times 4=14$
(a) Gneissose structure
(b) Porphyroblastic texture
(c) Charnockite
(d) Granulite
(e) Slate
(f) Amphibolite

D16—200/1445

2/EH-26(ii) (Syllabus-2015)