

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

2 0 2 2

(May/June)

GEOLOGY

(Elective/Honours)

(Petrology)

(GELH-201)

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

(Igneous Petrology)

UNIT—I

1. (a) What is magma? Explain how igneous rocks are formed from magma. Describe different factors that lead to generation of magma. 1+3+6=10
- (b) Describe any four forms of igneous intrusive bodies with neat sketches. 4

(2)

2. Write explanatory notes on any *two* from the following : $7 \times 2 = 14$

- (a) Bowen's reaction series
- (b) Magmatic differentiation
- (c) IUGS classification for plutonic rocks

UNIT—II

3. Define texture of igneous rocks. On what basis is igneous texture described? Explain different types of igneous texture with neat sketches. $1 + 1 + 12 = 14$

4. Write petrographic description on any *four* from the following : $3\frac{1}{2} \times 4 = 14$

- (a) Granite
- (b) Pegmatite
- (c) Dolerite
- (d) Syenite
- (e) Peridotite
- (f) Rhyolite

(3)

GROUP—B

(Sedimentary and Metamorphic Petrology)

UNIT—III

5. Differentiate between diagenesis and weathering. Describe different types of weathering. Add a note on authigenesis. $2 + 10 + 2 = 14$

6. Write notes on any *four* from the following : $3\frac{1}{2} \times 4 = 14$

- (a) Conglomerate
- (b) Grain shape
- (c) Ripple marks and graded bedding
- (d) Stromatolite and concretions
- (e) Environments of deposition of limestone
- (f) Dott's classification of sandstone

UNIT—IV

7. (a) What do you understand by the term 'metamorphism'? Explain how metamorphic rocks are formed. $2 + 6 = 8$
- (b) Discuss briefly different types of metamorphism. 6

(Turn Over)

8. Write short notes on any *four* from the following : $3\frac{1}{2} \times 4 = 14$

- (a) Barrovian index minerals
- (b) Granoblastic texture and granulose structure
- (c) Schistose and gneissose texture
- (d) Marble
- (e) Gneiss
- (f) Charnockite

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