2 0 2 1

(July)

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

(Introduction)

1. *(a)* How are igneous rocks formed? Mention the characteristic feature of volcanic and plutonic igneous rocks. 1+3=4

(b) Describe various forms of igneous intrusive bodies with the help of neat sketches. 10

2. *(a)* Why is the crystallization of orthoclase and quartz not a true reaction series? Explain how they were formed. 1+3=4

(b) Define differentiation. Discuss different types of processes that bring about magmatic differentiation. 1+9=10

UNIT—II

(Texture and Petrography)

3. Describe different types of textures found in igneous rocks with the help of neat sketches. 14

4. Write the petrography of any *four* of the following rocks : 3½×4=14

(a) Pegmatite

(b) Gabbro

(c) Syenite

(d) Peridotite

(e) Dolerite

GROUP—B

UNIT—III

(Sedimentary Petrology)

5. What is the difference between diagenesis and weathering? Explain *(a)* transportation and deposition and *(b)* diagenesis of sediments. 2+(6+6)=14

6. Write explanatory notes on any *two* of the following : 7×2=14

(a) Grain-shape of sedimentary rocks

(b) Limestones

(c) Dott's classification of sandstone

UNIT—IV

(Metamorphic Petrology)

7. *(a)* What is crystallization and neo-mineralization? 2

(b) Explain different agents of metamorphism. 12

8. Write notes on any *four* of the following : 3½×4=14

(a) Lepidoblastic and diablastic texture

(b) Gneissose structure

(c) Slate

(d) Amphibolite

(e) Granulite

★ ★ ★