FS – 18 / 15-16
Geology
Paper – II

Time : 3 hours

Full Marks : 200

The figures in the right-hand margin indicate marks.

*Candidates should attempt Q. No. 1 from Section – A and Q. No. 5 from Section – B which are compulsory and any **three** of the remaining questions, selecting at least **one** from each Section.*

SECTION – A

1. Answer any **two** of the following :   20×2 = 40

   (a) What is Reaction Principle ? Explain the fractional crystallization of basaltic magma.

   (b) Explain, in brief, the optical properties of rock forming minerals.

   (c) Explain the role of ithification and diagenesis in the formation of sedimentary rocks.

LB – 18/2   (Turn over)

2. What are alkaline rocks ? Describe the petrography and petrogenesis of Alkaline rocks and their occurrence in India. 40

3. Write explanatory notes on the following :

$20 \times 2 = 40$

(a) Garnet group of minerals

(b) Sedimentary basins of India

4. Discuss the importance of ACF and AKF phase diagrams and their importance in petrogenesis of rock units. Add a note on the chief agents of metamorphism. 40

SECTION – B

5. Write notes on any **two** of the following :

$20 \times 2 = 40$

(a) Metallogenic epochs and Province
(b) Marine mineral resources
(c) Environmental impact of urabanization

6. Describe the magmatic concentration process of formation of mineral deposits with suitable examples. 40

LB – 18/2 (2) Contd.

7. Write notes on the following : 20×2 = 40

    (a) Residual weathering process with suitable examples

    (b) Base metals of India

8. Answer any **two** of the following : 20×2 = 40

    (a) Geochemical Prospecting

    (b) Landslides and their mitigation

    (c) Structural control of deposits

————— ❈ —————

7. Write notes on the following : 20×2 = 40

   (a) Residual weathering process with suitable examples

   (b) Base metals of India

8. Answer any two of the following : 20×2 = 40

   (a) Geochemical Prospecting

   (b) Landslides and their mitigation

   (c) Structural control of deposits

———— ✳ ————