

Serial No.

1198

D-FDN-K-HB

GEOLOGY

Paper—II

Time Allowed : Three Hours

Maximum Marks : 200

INSTRUCTIONS

Candidates should attempt SIX questions in all including Question No. 1, which is compulsory, from Part—I and attempt ONE question each from Sections A, B, C, D and E from Part—II.

The number of marks carried by each question is indicated at the end of the question.

Answers must be written only in ENGLISH.

Symbols and abbreviations are as usual.

Neat sketches may be drawn to illustrate answers, wherever required.

PART—I

1. Write short notes on any TEN of the following :—

5×10=50

(a) Biaxial minerals

- (b) Cubic crystal system
- (c) Andesites
- (d) Phase diagrams
- (e) Metamorphic grades
- (f) Cyclic sediments
- (g) Sequence stratigraphy
- (h) Cosmic abundance of elements
- (i) Elementary thermodynamics
- (j) Isotope Geochemistry
- (k) River Valley projects
- (l) Legislative measures in India.

PART—II

SECTION—A

2. Write the classification of Silicate structures with neat sketches. 30
3. Write short notes on the following :— 5×6=30
- (a) Polymorphism
 - (b) Pleochroism
 - (c) Pigeonite
 - (d) Allanite
 - (e) Twinning and textures of Feldspars.

SECTION—B

4. Write an essay on the origin and late stage crystallization of Basaltic Magma. 30

5. Write short notes on the following :— 5×6=30
- (a) Migmatites
 - (b) Skarns
 - (c) Reaction Rims
 - (d) Batholiths
 - (e) Poikilitic Texture.

SECTION—C

6. Classify sedimentary rocks using different diagrams of grain size and mineral content and describe their importance. 30
7. Write short notes on the following :— 5×6=30
- (a) Matrix and cementing material of Sedimentary rocks
 - (b) Diagenesis
 - (c) Sedimentary Primary structures
 - (d) Isopach Maps
 - (e) Deltaic Sediments.

SECTION—D

8. Write in detail about the Interior of the Earth and its composition. 30
9. Write short notes on the following :— 5×6=30
- (a) Tektites
 - (b) Diodachy
 - (c) Cosmic Elements
 - (d) Origin of Solar System
 - (e) Trace gases of Atmosphere.

SECTION—E

10. Write in detail about the geological natural Hazards with respect to Indian subcontinent. 30
11. Write short notes on the following :— 5×6=30
- (a) Environmental Impact of Open Cast Mining
 - (b) Urbanization and its Environment
 - (c) Radioactive waste materials and impact on Environment
 - (d) Saline Water Intrusion and its effect on Groundwater
 - (e) Deforestation with respect to India.