6 SEM TDC GEOH (CBCS) C 13

2 0 2 4

(May)

GEOLOGY

(Core)

Paper : C–13

(Economic Geology, Coal and Petroleum)

<u>Full Marks : 53</u>
Pass Marks : 21

Time : 3 hours

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

UNIT—1

(Introduction to Economic Geology)

(*Marks : 5*)

1. *(a)* Write comments on the following statements : 1×3=3

   (i) Stockwork mineral deposits are good example of concordant ore bodies.

(*Turn Over*)

(ii) All economic minerals are ore minerals.

(iii) The concentration of gangue percentage is high in high-grade ore minerals.

(b) Write the difference between resources and reserves. 2

UNIT—2

(Ore Genesis)

(*Marks* : 12)

2. (a) What are the basic conditions for the formation of ore deposits? 2

(b) Explain the relationship between plate tectonics and ore deposits. 4

3. Write explanatory notes on any *two* of the following : 3×2=6

(a) Hydrothermal deposits

(b) Residual and mechanical concentration

(c) Skarn deposit

(Continued)

UNIT—3

(Mineral Exploration)

(*Marks* : 9)

4. (a) Describe briefly about the various geophysical exploration methods. 5

   (b) Write short notes on any *two* of the following : 2×2=4

   (i) Remote sensing in petroleum exploration

   (ii) Borehole logs

   (iii) Geochemical exploration

UNIT—4

(Metallic and Non-metallic Ores)

(*Marks* : 9)

5. (a) What is metalogenic province? Discuss India's major metalogenic provinces. 5

   (b) Write short notes on any *two* of the following : 2×2=4

   (i) Atomic minerals of India

   (ii) Gemstone

   (iii) Non-metallic industrial rocks

UNIT—5

(Coal)

(Marks : 9)

6. *(a)* Discuss the physical and chemical properties of coal. 5

   (b) Write short notes on any *two* of the following : 2×2=4

   (i) Calorific value

   (ii) Grades of coal

   (iii) Coal bed methane (CBM)

UNIT—6

(Petroleum)

(Marks : 9)

7. *(a)* Write about the physical characteristic and chemical compositions of petroleum. 5

   (b) Write short notes on any *two* of the following : 2×2=4

   (i) Cap rock and reservoir rock

   (ii) Oil shale and shale gas

   (iii) Moran oil field

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