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**6 SEM TDC GEOH (CBCS) C 13**

**2025**

( May )

**GEOLOGY**

( Core )

Paper : C-13

**( Economic Geology, Coal and Petroleum )**

*Full Marks : 53*

*Pass Marks : 21*

*Time : 3 hours*

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

**UNIT—I**

**( Introduction to Economic Geology )**

( Marks : 5 )

1. Answer the following questions as directed :

1×5=5

(a) What are economic minerals?

(b) Ores contain economically valuable minerals, while gangues are \_\_\_\_.

( Fill in the blank )

( 2 )

(c) Tenor represents the percentage or amount of valuable mineral in an ore deposit.

( Write True or False )

(d) Define grade of an economic mineral.

(e) Name one economic mineral found in Assam.

### UNIT—II

( Ore Genesis )

( Marks : 12 )

2. Write short notes on (any four) : 3×4=12

- (a) Skarns and Greisens deposits
- (b) Supergene enrichment deposits
- (c) Hydrothermal deposits
- (d) Placer deposits
- (e) Magmatic deposits

### UNIT—III

( Mineral Exploration )

( Marks : 9 )

3. (a) What is reserve estimation and why is it important in mining projects? Discuss the methods used for reserve estimation in mineral deposits. 1+1+2=4



( 3 )

(b) Write short notes on (any two) :  $2\frac{1}{2} \times 2 = 5$

- (i) Purpose of drilling in geological exploration
- (ii) Geophysical exploration
- (iii) Concept of geochemical anomalies and their relevances in exploration

#### UNIT—IV

( Metallic and Non-metallic ores )

( Marks : 9 )

4. (a) Discuss some of the important mineral deposits of India and plot them on a map.  $3+1=4$

(b) Write short notes on (any two) :  $2\frac{1}{2} \times 2 = 5$

- (i) Metallogenic province of India
- (ii) Atomic mineral deposits in India
- (iii) Gemstones

#### UNIT—V

( Coal )

( Marks : 9 )

5. (a) Write about the distribution of tertiary coal in NE India.

5

(b) Write short notes on (any two) :  $2 \times 2 = 4$

(i) Calorific value and rank of coal

(ii) Ultimate analysis of coal

(iii) Coal Bed Methane (CBM)

### UNIT—VI

#### ( Petroleum )

( Marks : 9 )

6. (a) Describe briefly about the migration and accumulation of petroleum. 5

(b) Describe geology and structure of either Moran or Bombay High oil field. 4

Or

(c) Write on physical and chemical properties of petroleum. 5

(d) Write on oil shale and shale gas. 4

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