

5/H-26 (vi) (Syllabus-2015)

2022

(November)

GEOLOGY

(Honours)

(GELH-503)

(Economic Geology)

Marks : 56

Time : 3 hours

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

Answer **four** questions, selecting **one** from each Unit

UNIT—I

(General Economic Geology)

1. (a) Define ore, gangue and tenor. 1+1+1=3
- (b) Give the simple genetic classification of mineral deposits in tabular form. 5
- (c) List and explain the various types of magmatic processes responsible for formation of mineral deposits. 6

(2)

2. (a) Write short notes on any *three* of the following : $3 \times 3 = 9$
- (i) Hydrothermal deposits
 - (ii) Cavity filling deposits
 - (iii) Residual concentration
 - (iv) Supergene enrichment process
- (b) Define metallogenetic epochs and metallogenetic provinces with examples. 5

UNIT—II

(Indian Economic Mineral Deposits)

3. (a) Mention two ore minerals of manganese with their respective chemical compositions. 2
- (b) Write notes on the mode of occurrence and distribution of lead deposits in India. $3+2=5$
- (c) Give a brief account on the Singhbhum copper deposits with respect to geology, mode of occurrence, origin and mineralization. 7

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(Continued)

(3)

4. Write short notes on any *four* of the following : $3\frac{1}{2} \times 4 = 14$
- (a) Mode of occurrence and origin of bauxite deposits
 - (b) Kolar gold fields
 - (c) Gypsum and its distribution in India
 - (d) Iron deposits of Jharkhand and Orissa
 - (e) Mica deposits of Bihar and its uses

UNIT—III

(Petroleum and Radioactive Minerals)

5. (a) Briefly describe the composition, migration and accumulation of petroleum. $3+3+3=9$
- (b) Discuss the organic origin of petroleum. 5
6. Name the important one mineral of uranium. Write notes on the mode of occurrence, origin, mineralogy, uses and distribution of uranium deposits in India. $2+2+2+2+4=14$

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(Turn Over)

UNIT—IV

(Coal)

7. (a) Define coal. Mention the various physical and chemical properties of coal. 1+3=4
- (b) Write brief notes on the mode of occurrence, formation, types/ranks and uses of coal. 2+3+3+2=10
8. Write short notes on any *four* of the following : 3½×4=14
- (a) Coke and carbonization
- (b) Fusinite
- (c) Distribution of coal in India
- (d) Fixed carbon fuel ratio
- (e) Macroscopic components of coal
