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(November)

GEOLOGY

(Major)

Course : 503

(Economic Geology)

Full Marks : 48

Pass Marks : 19 (Backlog) / 14 (2014 onwards)

Time : 2 hours

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

UNIT—7.1

(Principles of Economic Geology)

(Marks : 10)

1. (a) Define ore. Mention the names of the ore mineral of lead, manganese and chromium. 2

- (b) How is ore localization controlled by the physical and chemical properties of the host rock? 3

- (c) Discuss the relation between plate tectonics and mineral deposits. 5

Or

Describe the concepts of metallogenetic epoches and provinces with example.

UNIT—7.2

(Types of Mineral Deposits)

(Marks : 15)

2. (a) Fill in the blanks : 1×4=4

(i) The lowest admissible limit of metallic content of an ore is known as its ____.

(ii) Bauxite is generally formed by the process ____.

(iii) Gravity separation is responsible for the formation of ____ deposits.

(iv) The coloured surface geological feature which indicates useful ore deposits under earth is called ____.

- (b) Discuss the genetic classification of mineral deposits. 5

Or

Describe the various processes of formation of ore deposits associated with magmatic activity.

(c) Write short notes on any *two* of the following : 3×2=6

- (i) Residual and mechanical concentration
- (ii) Metasomatic replacement
- (iii) Cavity filling deposits

UNIT—7.3

(Mineral Deposits of India)

{ Marks : 15 }

3. (a) Discuss the origin, occurrences and distributions of chromite deposits in India. 7

Or

What are the common ores of manganese? Describe the importance of manganese and its mode of occurrence.

2+5=7

(b) Write short notes on any *two* of the following : 4×2=8

- (i) Geology of an oil field of Upper Assam
- (ii) Distribution of diamond deposits in India
- (iii) Raw materials for iron and steel industry
- (iv) Economic importance of clay minerals

UNIT—7.4

(Mineral Policy)

(Marks : 8)

4. (a) Discuss the essential features of the National Mineral Policy of India. 4

Or

Write a note on strategic and critical minerals of India.

- (b) Briefly suggest a policy for the water resources of the Brahmaputra Valley. 4

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