

5 SEM TDC GEO M 3

2 0 1 9

(November)

GEOLOGY

(Major)

Course : 503

(**Economic Geology**)

Full Marks : 48

Pass Marks : 19/14

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 and grade of ore. 1
- (b) Describe briefly the morphology of syngenetic deposits. 1
- (c) Mention the essential factors for formation of skarn deposits. 1

- (d) How do sea waves control formation of beach placer deposits? 1
- (e) Describe the mineral deposits formed in subduction zones. Give examples. 2
- (f) Describe the process of formation of mineral deposits by oxidation and supergene enrichment. 4

UNIT—7.2

(Types of Mineral Deposits)

(Marks : 15)

2. (a) Write briefly on the following : 1×4=4
- (i) Economic mineral deposits found in carbonatite
 - (ii) Evaporation deposits
 - (iii) Wall-rock alteration
 - (iv) Pegmatites and their economic minerals
- (b) Describe origin of diamond deposits in kimberlites and lamproites. Give suitable examples. 5

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

- (i) Tin-tungsten deposits
- (ii) Magmatic concentration process
- (iii) Chromium and platinum deposits in basic and ultrabasic rocks

UNIT—7.3

(**Mineral Deposits of India**)

(Marks : 15)

3. (a) Describe the origin, occurrence and distribution of zinc deposits in India. 7

Or

Describe the common ores of aluminium. Write on the geology and mode of occurrence of an important aluminium ore deposit of India. 7

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

- (i) Geology and hydrocarbon occurrence of either Lakwa or Rudrasagar Oilfield
- (ii) Distribution of atomic minerals in India

(iii) Coal deposits of N-E India

(iv) Deposits of minerals used as abrasives from N-E India

UNIT—7.4

(Mineral Policy)

(Marks : 8)

4. (a) What are the aims and elements of the National Mineral Policy of India? Mention its merits and demerits. 4
- (b) Write short notes on any *two* of the following : 2×2=4
- (i) Mineral conservation
 - (ii) Strategic and critical minerals
 - (iii) Growth of mineral industries in India
