

Total No. of Printed Pages—4

5 SEM TDC GEO M 3

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(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) What is 'average grade of ore'? 1
- (b) Which factor determines the tenor of ore? 1
- (c) Why ore minerals are not uniformly distributed in the earth's crust? 2

- (d) How is stratigraphy involved in ore localization? 2
- (e) Describe *either* 'hydrothermal' or 'oxidation and supergene enrichment' process of the formation of economic mineral. 4

UNIT—7.2

(Types of Mineral Deposits)

(Marks : 15)

2. (a) Answer the following questions : 1×4=4

- (i) What are the primary conditions to have a workable mineral deposit?
- (ii) Give an example of pathfinder element.
- (iii) What is the type of deposit in Kolar Gold Field?
- (iv) What are the economic minerals associated with Singhbhum Shear Zone?

(b) Describe the origin and structure of *either* 'Ophiolite' or 'Kimberlite'. 5

- (c) Write short notes on any *two* of the following : 3×2=6
- (i) Placer deposits
 - (ii) Stock work
 - (iii) Metallogenic epochs

UNIT—7.3

(Mineral Deposits of India)

(Marks : 15)

3. (a) Discuss the origin, occurrence and distribution of iron deposits of India. 7

Or

What are the common ores of copper? Describe the geology and structure of a copper field in India. 2+5=7

- (b) Write short notes on any *two* of the following : 4×2=8
- (i) Geology of the oldest oil field in Asia
 - (ii) Distribution of Lead-Zinc ores in India
 - (iii) Economic importance of limestone
 - (iv) Indian coal

UNIT—7.4

(Mineral Policy)

(Marks : 8)

4. (a) What are the objectives of the National Mineral Policy of India? 4
- (b) Write short notes on any *two* of the following : 2×2=4
- (i) Conservation and utilization of mineral resources
 - (ii) Energy resources
 - (iii) Strategic and critical minerals
