

Odd Semester, 2020

(Held in March, 2021)

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 an economic mineral deposit.
Explain the difference between ore
and gangue. 2+2=4
- (b) Describe the exogenetic process for the
formation of economic minerals. 10

2. Write short notes on any *four* of the
following : 3½×4=14

- (a) Cavity filling deposits
- (b) Metallogenetic epochs and provinces
- (c) Hydrothermal deposits
- (d) Magmatic concentration deposits
- (e) Supergene enrichment process

UNIT—II

(Indian Economic Mineral Deposits)

3. (a) Mention at least three ore minerals of
iron with their chemical composition. 2
- (b) Write notes on the mode of occurrence
and origin of iron and its uses. Give
brief account on the distribution of iron
in India. 6+6=12
4. Write short notes on any *four* of the
following : 3½×4=14
- (a) Mode of occurrence and origin of gold
 - (b) Lead-zinc deposit of Zawar, Rajasthan
 - (c) Mode of occurrence and origin of mica
 - (d) Uses of copper
 - (e) Ore minerals of manganese with their
respective chemical composition

(3)

UNIT—III

(Petroleum and Radioactive Minerals)

5. (a) Define petroleum. Briefly describe various forms of petroleum. 3
- (b) Discuss the organic origin of petroleum. 5
- (c) Draw a neat diagram of petroleum system and describe source rock, reservoir rock and trap. 6
6. Describe the origin and mineralogy of uranium. Add a note on mode of occurrence, uses and distribution of uranium deposits in India. 4+4+2+4=14

UNIT—IV

(Coal)

7. (a) Define coal. Write about the physical properties of coal. 4
- (b) Give a brief discussion on the 'in situ' and 'drift' theories of the origin of coal with evidences. 6
- (c) Write a note on formation of coal. 4

(4)

8. Write short notes on any *four* of the following :

$3\frac{1}{2} \times 4 = 14$

- (a) Difference between Gondwana and Tertiary coals
- (b) Distribution of coal in India
- (c) Rank of coal
- (d) Microscopic units of coal
- (e) Fuel ratio and fixed carbon content

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