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3 (Sem-5/CBCS) GLG HC 1

2022

GEOLOGY

(Honours)

Paper : GLG-HC-5016

(Economic Geology)

Full Marks : 60

Time : Three hours

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

1. Write short answers of the following as directed : **(any seven)** 1×7=7
 - (a) Define gangue minerals.
 - (b) What is the characteristic of high grade ore ?
 - (c) Give *two* examples of non-metallic resources.
 - (d) The ore deposits which are formed towards the close of the magmatic period are called _____.
(Fill in the blank)

Contd.

- (e) What is the temperature range of hypothermal deposits?
- (f) Define positive gravity anomaly.
- (g) Resistivity traversing is also known as _____.
(Fill in the blank)
- (h) The eluvial placer deposits occur along the _____.
(Fill in the blank)
- (i) Write the names of largest skarn deposits.
- (j) Oxidation and supergene enrichment are occurred together.
(Write True or False)
- (k) In which place of Andhra Pradesh, lead, zinc ore deposits are found?
- (l) What are the common ore minerals of manganese?
2. Write brief answers to the following questions: **(any four)** $2 \times 4 = 8$
- (a) Define lode.
- (b) How segregation mineral deposits are formed?
- (c) Write the chief ores of lead with their chemical composition.

- (d) What are the uses of gravity geophysical exploration method?
- (e) Write briefly about magnetic survey.
- (f) Give *four* examples of ore minerals which are formed by hydrothermal process.
- (g) Write the *two* ore minerals of uranium with their chemical formula.
- (h) What are different types of asbestos?
3. Write short notes on the following:
(any three) $5 \times 3 = 15$
- (a) Magnetic concentration process of ore deposits
- (b) Placer deposits
- (c) Self potential (SP) method of geophysical exploration
- (d) Discordant ore bodies
- (e) Mention the name of different refractory minerals
- (f) Ore minerals of thorium and their distribution in India
- (g) Mode of occurrence and origin of gemstone

4. Answer the following questions : (**any three**)
 $10 \times 3 = 30$

- (a) Define late magmatic deposits. What are the types of late magmatic deposits? Give a brief description about the different types of late magmatic process of ore deposits. $1+2+7=10$
- (b) Write in detail about the hydrothermal process of ore deposits.
- (c) Discuss about the types of resistivity method of Geophysical exploration.
- (d) Write in detail about the seismic method of Geophysical exploration.
- (e) Give a detail account on residual and mechanical concentration of ore deposits.
- (f) Discuss about the metallogenic epochs and provinces.
- (g) Write briefly about the mode of occurrence and distribution of copper deposits in India.