

Total number of printed pages-4

3 (Sem-5/CBCS) GLG HC 1

2023

## GEOLOGY

(Honours Core)

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 :  $1 \times 7 = 7$ 
  - (a) Give *two* examples of gangue minerals.
  - (b) Ladder veins are commonly found in \_\_\_\_\_ .  
(Fill in the blank)
  - (c) Igneous intrusion is associated with residual liquid injection or residual liquid segregation.  
(Write the correct one)

Contd.



(d) Define positive gravity anomaly.

(e) Resistivity logging measures the subsurface electrical \_\_\_\_\_.

(Fill in the blank)

(f) What is the function of drilling fluid in rotary drilling method?

(g) Write the *two* names of copper ores.

2. Write brief answers to the following questions :  $2 \times 4 = 8$

(a) How cavity filling ore deposits are formed?

(b) Differentiate primary and secondary dispersion pattern in geochemical exploration.

(c) Write briefly about Gossan.

(d) Write the *four* names of tertiary coal fields.

3. Write short notes on the following :  
(*any three*)  $5 \times 3 = 15$

(a) Late magmatic deposits

(b) Skarn deposits

(c) Resistivity method of geophysical exploration

(d) Metallogenic provinces and epochs

(e) Origin of porphyry copper deposits

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

(a) How hydrothermal ore deposits are formed? Write in detail about the classification of hydrothermal ore deposits.  $2+8=10$

(b) Write about the equipotential method and electromagnetic method of geophysical exploration.  $5+5=10$

(c) Write in detail about the rotary drilling method of oil exploration.

(d) Define geochemical cycle. Discuss about the methods of geochemical exploration.  $2+8=10$

(e) How oxidation and supergene sulphide enrichment deposits are formed? Write about the process of supergene enrichment.  $2+8=10$

(f) Write briefly about the mode of occurrence and distribution of lead and zinc deposits of India.

4. Answer the following questions: (any three)

10×3=30

(a) How hydrothermal ore deposits are formed? Write in detail about the classification of hydrothermal ore deposits.

(b) Write about the equipotential method and electromagnetic method of geophysical exploration.

(c) Write in detail about the rotary drilling method of oil exploration.

(d) Define geochemical cycle. Discuss about the methods of geochemical exploration.

(e) How oxidation and supergene sulphide enrichment deposits are formed? Write about the process of supergene enrichment.