

**2023**

**Time - 3 hours**

**Full Marks - 60**

*Answer all groups as per instructions.  
Figures in the right hand margin indicate marks.*

**GROUP - A**

1. Fill in the blanks. (all) [1 × 8
- (a) The mineral deposits formed by the mechanical concentrations are called \_\_\_\_\_.
- (b) A \_\_\_\_\_ is a mass of rock traversed by a network of small ore bearing veins.
- (c) The residual limonite of Gossans usually shows a honeycomb structure called \_\_\_\_\_.
- (d) The fixed carbon of lignite is \_\_\_\_\_.
- (e) The unit of calorific value is \_\_\_\_\_.
- (f) \_\_\_\_\_ refers only to the liquid oil.
- (g) The temperature range of mesothermal deposits is between \_\_\_\_\_.
- (h) Beach sands of Kerala contain \_\_\_\_\_ and \_\_\_\_\_ deposits.

GROUP – B

2. Write notes on any eight of the following within two to three sentences each.

[1½ × 8

- (a) Eluvial placer deposits
- (b) Cave deposits and Gash veins
- (c) Ladder veins
- (d) Epithermal deposits
- (e) Crustification
- (f) Hypothermal deposits
- (g) Late magmatic deposits
- (h) Strategic minerals
- (i) Gossan
- (j) Peat

GROUP – C

3. Write notes on any eight of the following within 75 words each.

[2 × 8

- (a) Ranks of coal
- (b) Cannel coal
- (c) Banded constituents of coal

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- (d) Oxidation
- (e) Oil fields of Assam
- (f) Process of supergene enrichment
- (g) Evaporation deposits
- (h) Stock works
- (i) Fissure veins
- (j) Zoning

**GROUP – D**

*Answer **all** questions within 500 words each.*

4. Describe briefly about Magmatic concentration. [6]

OR

Describe briefly about the hydrothermal process of mineral formation.

5. Discuss the formation of placer by mechanical concentration. [6]

OR

Explain the formation of contact metasomatic and contact metamorphic deposits.

6. Discuss the origin, distribution, occurrences and uses of Coal.

[6]

P.T.O.

[ 4 ]

OR

Discuss the origin, distribution, occurrences and uses of petroleum.

7. Describe sustainable developments of minerals. [6]

OR

Describe strategic, essential and critical minerals. Cite examples.