

**H-4/17/22**

Roll No. ....

**IV Semester Examination, 2022****M.Sc.****GEOLOGY****Paper I****[Economic Geology-I (Ore Forming Process)]**

Time : 3 Hours ]

[ Max. Marks : 80

**Note :** All questions are compulsory. Question Paper comprises of 3 sections. Section **A** is objective type/multiple choice questions with no internal choice. Section **B** is short answer type with internal choice. Section **C** is long answer type with internal choice.

**SECTION A****1×10=10****(Objective Type/Multiple Type Questions)***Choose the correct answer :***1.** Syngenetic deposits are crystallised :

- (a) Before the host rocks
- (b) After the host rocks
- (c) Simultaneously with host rocks
- (d) All of the above

**2.** Sideronitic texture is typically associated with :

- (a) Hydrothermal deposits
- (b) Contact metasomatic deposits
- (c) Late magmatic deposits
- (d) Early magmatic deposits

**3.** If the colour of the gossan is black, it indicate the presence of :

- (a) Iron
- (b) Manganese
- (c) Copper
- (d) Graphite

**4.** Placer deposits are formed as a result of :

- (a) Residual liquid segregation
- (b) Residual concentration
- (c) Mechanical concentration
- (d) All of above

**5.** In a complex pegmatite, the zone that is richest in economic mineral is :

- (a) Border zone
- (b) Wall zone
- (c) Intermediate zone
- (d) Core zone

**6.** Hydrothermal deposits are mostly :

- (a) Syngenetic
- (b) Epigenetic
- (c) Residual
- (d) Placer

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7. The metasomatic deposits are usually resulted in :
- Calcareous rocks
  - Arenaceous rocks
  - Ferruginous rocks
  - Siliceous rocks
8. Are deposits which are restricted to a specific stratigraphic horizon are known as :
- Stratiform deposits
  - Stratabound deposits
  - Skarn deposits
  - None of the above
9. The Bauxite deposits formed due to weathering do not placed any metallogenic epoch because :
- Weathering is not a ore forming process
  - The process of weathering has operated
  - Weathering cannot form ore deposits
  - None of above
10. The most common reservoir rocks for petroleum are :
- Limestone
  - Sandstone
  - Shale
  - Conglomerate

**SECTION B****4×5=20****(Short Answer Type Questions)****Unit-I**

1. Discuss the texture of ores.

*Or*

Discuss the paragenesis and zoning in ores.

**Unit-II**

2. Write a note on skarn deposits.

*Or*

Write note on wall rock alteration.

**Unit-III**

3. Discuss the ore deposits formed by early magmatic deposits.

*Or*

Write a note on replacement deposits.

**Unit-IV**

4. Write a note on fluid inclusion studies.

*Or*

Write a note on geothermobarometry ?

**Unit-V**

5. Write a note on metallogenic epoch ?

*Or*

Discuss the relation of plate tectonics and mineral deposits.

**SECTION C****10×5=50****(Long Answer Type Questions)****Unit-I**

1. What is ore bearing fluids ? Describe the origin and migration of ore bearing fluids.

*Or*

Describe the ore deposits genetically associated with metamorphic activities.

**Unit-II**

2. Describe the residual and mechanical concentration processes of ore formation.

*Or*

Describe the oxidation and supergene sulphide enrichment process.

**Unit-III**

3. Discuss the magmatic process of ore formation.

*Or*

Describe the hydrothermal process of ore formation.

**Unit-IV**

4. Describe the stratiform and stratabound deposits.

*Or*

Describe the metamorphic process of ore formation.

**Unit-V**

5. Discuss the process of plate tectonics and mineral deposits.

*Or*

Discuss the various theories of origin of petroleum and process of accumulation.

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