

**Parvatibai Chowgule College of Arts and Science**  
**Autonomous**

B.Sc. Semester End Examination, January/February 2022

Semester : III

Subject : Geology

Course : Ore Genesis - (Elective)

Duration : 2 Hours

Time : 10:00am –12:00 noon

Max. Marks: 45

Submission before 1.00

pm

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- Instructions:**
1. All questions are compulsory.
  2. Figures to the right indicate maximum marks allotted.
  3. Answers must be written on A-4 size print papers only
  4. Write the correct question number and the alpha numeral against each answer
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Q.1] Answer any THREE from the following: (09)

- a. Comment on the scope and objectives of 'Economic Geology'.
- b. How would you relate 'ore minerals' and 'ore deposits'?
- c. How is ore formation controlled by tectonic activity?
- d. Highlight the significance of Sydbury Igneous Complex in ore mineralogy.

Q. 2] Answer any TWO from the following: (12)

- e. What are 'Hydrothermal solutions'? What are their possible sources? How does temperature and pressure control the activity of hydrothermal fluids in creating ore deposits?
- f. Explain what you understand by 'Syngenetic' and 'Epigenetic' ore deposits. Discuss how Beck classified ore deposits based on these types?
- g. Why are 'Carbonatites' classified as alkaline rocks? Give an outline of the economic importance of carbonatites.

Q.3] Answer any TWO from the following: (12)

h. How are Placer gold deposits formed? Give an outline of the gold deposits located in the Kolar Schist Belt.

j. Provide a classification of coal based on i. coaking properties

ii. nature of plant material, and

iii. physic-chemical changes

k. Outline the structure and characteristics of lead and zinc deposits of Zawar mines in India.

Q.4] Answer any ONE (A or B) from the following:

A)

m. Give a comparative account of the manganese ores formed as an aftermath of the Satpura orogeny and the Eastern Ghat orogeny. (07)

n. Classify the layered mafic intrusions based on their situation. Explain how the world's largest layered mafic body has developed. (05)

OR

B)

p. What are 'Banded Iron Formations'? On what basis have they been subdivided? Give a comparative account of each subdivision. (07)

q. What is a "Skarn"? How are ore deposits related to such rocks? (05)

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