

This question paper contains 1 printed pages.

1323

Your Roll No.....

B.Sc. (Hons.)/III

A

GEOLOGY - Paper VIII
(Earth Resources and their Management)
(Admissions of 2004 and onwards)

Time : 3 hours

Maximum Marks : 45

(Write your Roll No. on the top immediately on receipt of this question paper.)

*Attempt any five questions.
All questions carry equal marks*

- 1) Write short notes on any three of the following
 - a) Cut-off grade
 - b) Definition and determination of bulk density
 - c) Mineralized zone and ore zone
 - d) Accuracy and precision
 - e) Isopach and isochore method of reserve estimation
- 2) Discuss the various theories on the origin of coal. Comment on the origin of Indian coal deposits citing evidence .
- 3) Describe any two of the following:
 - a) Goldschmidt's geochemical classification
 - b) Primary and secondary dispersion
 - c) Overhand and underhand stoping.
- 4) Describe at least two opencast and two underground methods of mining with their advantages and limitations. Draw suitable sketches wherever necessary.
- 5) Define mode, median and mean and discuss it in the context of symmetrical and asymmetrical distribution. What is one-sided and two-sided interval estimate and what is its relevance in mineral exploration?
- 6) Explain strategic, critical and essential minerals from Indian Perspective
- 7) Give a brief account of the following:
 - a. Importance of mineral in national economy
 - b. Industrial raw materials of India
 - c. National mineral policy
- 8) Define 'source rock' for hydrocarbon. What is kerogen? Discuss transformation of kerogen with burial and increase of temperature.