

1329

Your Roll No.....

B.Sc. (Hons.)/III

A

GEOLOGY - Paper XII (iii)
(Geoprospecting & Mining)
(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*

Q. 1. State various aspects of prospecting in a mineralized zone. Discuss the magmatic and structural criteria in this context.

Q. 2. Explain with suitable diagrams from following any three terms in underground mining:

- a) Shafts b) Drive c) Adit d) Raise

Q. 3 What is the primary source of diamond? Name atleast two indicator minerals for diamond. A diamond is discovered in a riverbed. Describe the most appropriate exploration strategy for locating the primary source within the river basin.

Q. 4. Describe the following in brief;

- a) Geochemical anomaly
b) Secondary dispersion
c) Mean, mode and median

Q. 5. Describe the difference between mineral resource and reserve. How are the mineral resources and reserves classified?

Q. 6. Describe various methods of core and non-core drilling methods. What are their relative advantages and disadvantages?

Q. 7. Describe atleast two opencast and two underground methods of mining with their advantages and limitations. Draw suitable sketches wherever necessary.

Q. 8. How are physical properties of rocks/minerals helpful in prospecting for a mineral deposit? Describe any one geophysical method of exploration with neat sketches.