

MASTER OF SCIENCE EXAMINATION, 2018

(2nd Year, 1st Semester)

APPLIED GEOLOGY

Fuel Geology

Paper - X

Time : Two hours

Full Marks : 50

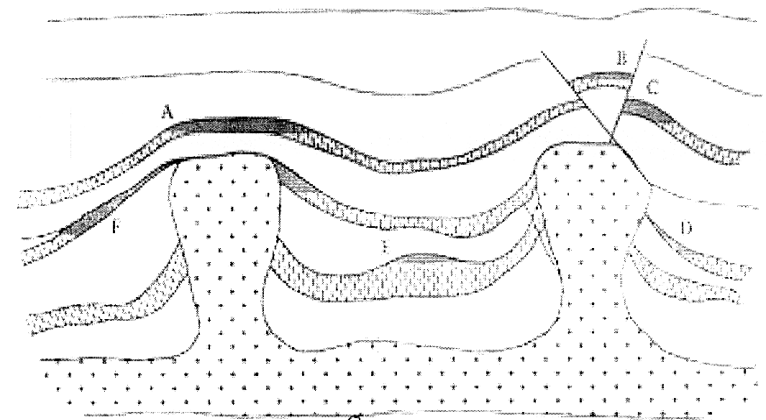
Use separate answer script for each group.

GROUP - A (25 marks)

(Petroleum Geology)

Answer **q.no. 1** is compulsory and any **two** from the rest.

1. Name the different types of trap (A,B,C,D,E and F) as indicated in the diagram below : 5



(Turn over)

(2)

2. What is a well log? Distinguish between closed and open hole logs. What are the logs used for identification of lithology and hydrocarbon saturation. Explain in details. $1+1+2+6=10$
3. Discuss briefly the petroleum systems of Andaman basin or Rajasthan basin. 10
4. What is a Drill Stem Test? What are the basic types of drive mechanisms? Discuss in briefly. What is EOR? State briefly the various techniques of EOR? $1+1+4+1+3=10$

GROUP - B (25 marks)

Answer **all** questions.

5. What are the basic types of peat-forming mires? Give a brief account of these mires. Write down the factors controlling the nature of peat forming mires. $1+2+7$

OR

Define microscopic constituents of coal. Provide their broad classification. What are the microlithotypes? Describe different microlithotypes with respect to their microscopic constituents. $2+1+2+5$

(3)

6. Distinguish between 'biochemical' and 'geochemical' coalification. Write down the major changes (both physical and chemical) occurring during biochemical coalification. Briefly describe the nature and extent of major gases expelled during coalification. $3+4+3$

OR

Define gasification of coal. Discuss the main processes of gasification. Write down the parameters controlling the choice of gasifiers. What are the major products of gasification? $1+5+2+2$

7. Write short note on (any **two**) : $2 \times 2.5 = 5$
- (a) Seyler's Classification.
- (b) Gray-King Carbonization assay.
- (c) Cleats in coal.

— X —