MN302 - Introduction to Mining Technology

P. Pages : 2 **GUG/W/16/3800**

Time : Three Hours

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3635

Max. Marks : 80

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Notes : 1. Due credit will be given to neatness and adequate dimensions.
2. Assume suitable data wherever necessary.
3. Illustrate your answers wherever necessary with the help of neat sketches.
4. Weightage to the question indicated on its right.

1. a) Discuss contribution of mining in developing human civilization.   **8**

b) How does mining contribute to Economic growth of any Nation.   **8**

OR

2. Define the following terms with neat sketch wherever necessary.   **16**

i) Mine   ii) Mineral

iii) Shaft   iv) Level

v) Winze   vi) Pillar

vii) Hanging wall   viii) Cross cut

3. a) Explain in detail phases of Mining.   **8**

b) What are the different methods of prospecting? Explain any one method in detail known to you.   **8**

OR

4. Enlist various method of access to mineral leed with its suitability. Compare shaft with Incline as mode of access.   **16**

5. a) What are the various shapes and sizes of shafts which are used in underground coal metal mines?   **4**

b) State & explain the factors which will affect the site selection of shaft.   **6**

c) What is temporary lining? Explain with neat sketch.   **6**

OR

6. Explain with neat sketch the applicability conditions, advantages & disadvantages of CAISSON Method of shaft sinking.   **16**

7. a) Classify the coal mining methods. **4**

b) What do you understand by the cyclic and continuous methods of mining & compare it. **6**

c) Explain in detail "Production Cycle" in case of U/G Coal Mining. **6**

OR

8. a) State applicability, advantages and limitation of longwall method of coal extraction. **8**

b) Compare opencast mining with underground mining. **8**

9. a) Explain with neat sketch conventional method of driving. **16**
A drift of 4.8 m x 3.5 m. Explain the following in detail.

   i) Drilling, charging, stemming & firing.

   ii) Ventilation

   iii) SUPPORT.

OR

10. Explain with neat sketch Tunneling and Road heading machines used in Metalliferous & coal mines. **16**

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