CBCS SCHEME

USN | | | | | | | | | | |

18MN35

Third Semester B.E. Degree Examination, Jan./Feb. 2021
Drilling and Blasting

Time: 3 hrs. Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

1 a. What are the various Exploratory drills used? Explain any one in detail. **(10 Marks)**

b. Explain in detail the diamond drilling used in exploration of minerals with its applicability. **(10 Marks)**

OR

2 a. Explain Single and Double tube core barrels used in core recovery process. With a neat sketch. **(10 Marks)**

b. Explain core logging and storage of cores with neat sketch. **(05 Marks)**

c. Explain Interpretation of bore hole data. **(05 Marks)**

Module-2

3 a. Explain the applicability and limitations of rotary drilling with a neat sketch. **(10 Marks)**

b. With a neat sketch, Explain the fundamentals of percussive drilling process. **(10 Marks)**

OR

4 a. Explain DTH drilling with a neat sketch. **(10 Marks)**

b. Select a drilling method and blast design for a medium hard work large open cast mines. **(10 Marks)**

Module-3

5 a. What are the different types of explosives, available? Mention their composition. **(06 Marks)**

b. Choose an example for large scale production considering the watery strata. And explain with diagram. **(08 Marks)**

c. Explain in detail the transportation, storage and handling of explosives. **(06 Marks)**

OR

6 a. With a neat diagram explain electric detonator. **(05 Marks)**

b. Explain in detail NONEL Blasting. **(10 Marks)**

c. What are the accessories required for electric blasting. **(05 Marks)**

Module-4

7 a. What are the factors to be considered while selecting a drilling system for an open cast mines. **(10 Marks)**

b. Explain the mechanics of rock segmentation with a neat diagram/sketch. **(10 Marks)**

OR

8 a. What are the factors affecting blasting in an opencast mine? **(10 Marks)**

b. Explain how will you reduce ground vibration and other problems associated with blasting in an opencast mine. **(10 Marks)**

Module-5

9 a. Explain blasting-off-solid and its applicability with a neat sketch. **(10 Marks)**

b. Explain ring hole blasting with a neat sketch. **(10 Marks)**

OR

10 a. Explain the blast design for horizontal drainages in metal mines with a neat sketch. **(10 Marks)**

b. Explain long hole parallel blasting in u/g metal mines with a neat sketch. **(10 Marks)**

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