

CBCS SCHEME

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15MN46

Fourth Semester B.E. Degree Examination, June/July 2018 Drilling and Blasting Engineering

Time: 3 hrs.

Max. Marks: 80

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

Module-1

- 1 Define the term drillability of rock. Explain the factors, which influence the drillability of rock in percussive drilling, with suitable diagrams. (16 Marks)

OR

- 2 What are the various drill bits commonly used in percussive rotary and rotary percussive drilling? Explain each bit in detail, with suitable figures. Give applications. (16 Marks)

Module-2

- 3 a. Explain various properties of explosives. (08 Marks)
b. Discuss on
(i) Emulsion explosives (ii) Site Mixed Slurry (SMS) explosives. (08 Marks)

OR

- 4 Write short notes on :
a. Permitted explosives (08 Marks)
b. ANFO (08 Marks)

Module-3

- 5 a. Explain with a neat diagram, the constructional features and purpose of each part of an electric detonator? (08 Marks)
b. What is a misfire? Explain in detail the procedure to be adopted in dealing with a misfire in underground coal mines. (08 Marks)

OR

- 6 Write short notes on :
a. Exploder (08 Marks)
b. NONEL blasting. (08 Marks)

Module-4

- 7 a. Explain the procedure to be observed while transporting explosives in bulk. What are the precautions to be observed during such operation? (10 Marks)
b. Discuss on "Hydrox". (06 Marks)

OR

- 8 What are the causes for accidents due to blasting? Explain in detail the measures to be taken to prevent such accidents. (16 Marks)

Module-5

- 9 Explain the factors affecting rock breakage by blasting, with suitable examples. (16 Marks)

OR

- 10 Write short notes on :
a. Vibrations due to blasting (08 Marks)
b. Controlled blasting methods. (08 Marks)

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