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10MN52

Fifth Semester B.E. Degree Examination, Dec.2018/Jan.2019
Mine Environmental Engineering - I

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions, selecting atleast TWO questions from each part.

PART – A

- 1 a. Explain the physical , chemical and physiological effects of oxygen and carbon dioxide. (10 Marks)
b. Explain the detection and prevention of black damp and white damp. (10 Marks)
- 2 a. Write short notes on :
i) Methane drainage ii) Methane layering. (10 Marks)
b. Explain the testing of fire damp by safety lamp. (10 Marks)
- 3 a. With a neat sketch, explain Kata thermometer. (10 Marks)
b. Give the sources of heat in coal mines. Explain. (10 Marks)
- 4 a. Explain the air flow in mine by ascensional and decensional ventilation. (10 Marks)
b. Explain the laws of Mine air friction. (10 Marks)

PART – B

- 5 a. Write short notes on :
i) Reynold's number ii) Coward's diagram. (10 Marks)
b. What is Natural ventilation? How can it be done? (10 Marks)
- 6 a. What are the types of fans used in underground mines? Explain with a neat sketch of centrifugal fan. (10 Marks)
b. With a neat sketch, explain characteristics of forcing fan and exhaust fan. (10 Marks)
- 7 Explain the importance of Ventilation Survey in underground mines. (20 Marks)
- 8 Explain the objectives of Ventilation planning in underground mines. (20 Marks)
