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10MN44

Fourth Semester B.E. Degree Examination, Dec.2018/Jan.2019
Mining Machinery - 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 in detail about the power generation by steam. (10 Marks)
b. Explain about the procedures for Track laying and its maintenance. (10 Marks)
- 2 a. Write a detailed note on sources of power for compressors. (10 Marks)
b. Write a detailed note on equipment using compressed air. (10 Marks)
- 3 a. Explain about the techno – economic indices of mine transport system. (10 Marks)
b. With a neat sketch, explain the working principle of gravity haulage. (10 Marks)
- 4 a. Explain about the care and storage of wire ropes. (10 Marks)
b. With a neat sketch, explain about the Split Capel with rivets. (10 Marks)

PART – B

- 5 a. Explain in detail about steam locomotive. (10 Marks)
b. Explain in detail about diesel locomotive. (10 Marks)
- 6 a. With a neat sketch, explain about belt conveyor. (10 Marks)
b. With a neat sketch, explain about rope belt conveyor. (10 Marks)
- 7 a. What are the advantages and disadvantages of Multi rope winding? (10 Marks)
b. With neat sketches, explain the different shapes of the drum. (10 Marks)
- 8 a. Find out the static torque at the beginning, middle and at the end of the wind when each cage weighs 10 tons, carries 6 tubs taring 0.5 tonnes and holding 1 ton of coal. Take drum diameter to be 2.5m and the depth of the shaft 1000m. The rope weighs 10 tonnes. (10 Marks)
b. Explain about the maintenance management of mining machinery. (10 Marks)
