



C16-MNG-304

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BOARD DIPLOMA EXAMINATION, (C-16)
MARCH/APRIL—2018
DMNG—THIRD SEMESTER EXAMINATION
MINING MACHINERY—I

Time : 3 hours]

[Total Marks : 80

PART—A

3×10=30

Instructions : (1) Answer **all** questions.
(2) Each question carries **three** marks.
(3) Answers should be brief and straight to the point and shall not exceed *five* simple sentences.

1. Define the term space factor and bending factor.
2. List the causes of deterioration of wire ropes.
3. List the different methods of capping the wire ropes.
4. State the purpose of transportation in mines.
5. State the applicabilites of endless rope haulage.
6. List two merits and demerits of cable belt conveyor.
7. State the two merits and two demerits of diesel locomotives.
8. Define (a) static suction head and (b) static discharge head.
9. Explain the purpose of air vessel.
10. Explain the term water hammer.

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PART—B

10×5=50

- Instructions :** (1) Answer *any five* questions.
(2) Each question carries **ten** marks.
(3) Answers should be comprehensive and the criterion for valuation is the content but not the length of the answer.

- 11.** (a) State the composition of material used in the preparation of wire ropes.
(b) Explain the process of field tests to be conducted on wire ropes.
- 12.** Explain Coned-Socket type Capel.
- 13.** Describe the direct rope haulage system.
- 14.** Describe the tensioning arrangement for endless rope haulage.
- 15.** Explain the constructional details of belt conveyor system with sketch.
- 16.** Explain the exhaust conditioner and flame trap fitted to diesel locomotive.
- 17.** Explain the constructional details and working of reciprocation pumps.
- 18.** (a) Explain the term 'end thrust' as used in turbine pump.
(b) Describe about the balancing of the end thrust with a sketch.
