



C09-MNG-404

**3515**

**BOARD DIPLOMA EXAMINATION, (C-09)**

MARCH / APRIL - 2019

**DMNG - IV SEMESTER EXAMINATION**

**MINING MACHINERY - I**

Time : 3 Hours]

[Total Marks : 80

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**PART - A**

**3×10=30**

- Instructions :**
- (1) Answer *ALL* questions.
  - (2) Each question carries *THREE* marks.
  - (3) Answer should be brief and straight to the point.

- 1 State the applicability of different types of wire ropes in mining.
- 2 Define the terms : (a) wear (b) Surface embrittlement.
- 3 Define the term tucking in splicing.
- 4 State the different methods of capping the wire ropes.
- 5 State the purpose of transportation in mines.
- 6 Classify the rope haulages used in Mining.
- 7 State the merits of scraper chain conveyor.
- 8 State the merits of Belt Conveyor.
- 9 List the applicabilities of mono cable aerial rope.
- 10 State the applicability's of electric battery locomotive.

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[ Contd...

**PART - B**

**10×5=50**

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

- 11 Explain the field tests to be conducted on wires in rope.
- 12 Explain the constructional details of the following with sketches :
  - (a) Simple strand rope
  - (b) Locked coil rope.
- 13 Describe the method of white metal capping with sketch.
- 14 Describe the tensioning arrangement for endless haulage system with sketches.
- 15 Describe the main and tail rope haulage system with sketch including safety devices employed.
- 16 Explain the factors governing the selection of system of rope haulage.
- 17 Explain the belt conveyors along with tensioning arrangement with a neat sketch.
- 18 State merits, demerits of battery locomotives system.

