



C16-MNG-105

**5048**

**BOARD DIPLOMA EXAMINATION, (C-16)**

MARCH / APRIL - 2019

**DMNG - FIRST YEAR EXAMINATION**

**ELEMENTS OF MINING**

Time : 3 Hours]

[Total Marks : 80

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**PART - A**

**2×15=30**

- Instructions :**
- (1) Answer any 15 questions.
  - (2) Each question carries 2 marks.
  - (3) Answer should be brief and straight to the point and shall not exceed five simple sentences.

- 1 Define the term 'Ore deposit'.
- 2 List the various Mining Industries in the state.
- 3 Define the term incline with a sketch.
- 4 List the various stages of Mining operations.
- 5 Define the term reserve station.
- 6 Define the term face.
- 7 List the uses of boreholes.
- 8 Define the term mud flushing.
- 9 Define the term high explosive.
- 10 State the composition of low explosive.

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- 11 Define the term Cap sensitive explosives.
- 12 List the types of initiation of explosives.
- 13 List any two reasons for changes in the composition of air while it passes through mine working.
- 14 List the noxious gases.
- 15 State the physiological effects of Black damp.
- 16 List the type of flame safety lamps based on their feed.
- 17 List the necessary equipment required for sinking a shaft.
- 18 Classify the special methods of shaft sinking.
- 19 List the methods of permanent supporting the shaft sides.
- 20 List the modern techniques used in shaft sinking.

**PART - B**

**10×5=50**

**Instructions :**

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

- 21 List the differences between Shaft and Incline in any ten aspects.
- 22 Give the classification of coal seams based on the thickness depth, inclination and gassiness.
- 23 (a) Give the classification of drilling methods and state its applicability.  
(b) List the drilling tools and accessories used in rotary drilling.

- 24 (a) Explain the characteristics of explosives. **6+4=10**  
(b) List the properties of high explosives.
- 25 (a) Define the term Booster. **2+4+4=10**  
(b) State the composition of high explosives.  
(c) State the field application of detonators.
- 26 State the Chemical, Physical, and Physiological effects of poisonous gases.
- 27 Explain the different stages of sinking through normal strata.
- 28 Explain Caisson Methods of shaft sinking with a neat sketch.
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