



**C20-MNG-504**

**7664**

**BOARD DIPLOMA EXAMINATION, (C-20)**

**OCTOBER / NOVEMBER—2023**

**DMNG – FIFTH SEMESTER EXAMINATION**

**MINING MACHINERY—II**

*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) Answers should be brief and straight to the point and shall not exceed five simple sentences.

1. List the different drills used in mines and state their field use.
2. State the purposes of air leg.
3. Write about the principle of lump breaker.
4. List any three factors governing the selection of power supports.
5. State the field use of intrinsic safe apparatus.
6. List the methods of jointing mine cables.
7. List any six equipments required for winding in shafts.
8. List the applicable conditions of flexible guides.

9. Classify the different types of winding systems in all aspects.
10. List any three demerits of friction winding system.

**PART—B**

8×5=40

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

11. (a) Explain the working of Hammer rock drill machine with a sketch.

**(OR)**

- (b) Explain the principles of working of Rocker Shovel used in mines.

12. (a) Explain the principle of working of Armoured Face Conveyor (AFC).

**(OR)**

- (b) Explain the working of Single-Ended Ranging Drum Shearer (SERDS) with a sketch.

13. (a) Describe the constructional features of flame proofing.

**(OR)**

- (b) Explain about the care and maintenance of mine cables.

14. (a) Explain the working of king's safety detaching hook with a sketch.

**(OR)**

- (b) Explain the types of headgear frames and state their purposes.

15. (a) Explain the working of drum winding system with a sketch.

**(OR)**

- (b) Explain about regenerative braking system.

**PART—C**

10×1=10

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

- 16.** Explain the constructional details of cage suspension gear and state the purpose of each component in it.

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