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C20-MNG-304

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BOARD DIPLOMA EXAMINATION, (C-20)

OCTOBER/NOVEMBER—2023

DMNG – THIRD SEMESTER EXAMINATION

UNDERGROUND COAL MINING METHODS

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 bord and pillar mining.
2. List the different factors governing the selection of development of bord and pillar method.
3. Classifies the methods of depillaring.
4. State the necessity of stowing.
5. Define the terms (a) Main gate and (b) Pack wall.
6. List the different factors governing the length of longwall face.
7. List the difficulties in working of thick seam.
8. List the applicabilitys of Blasting Gallery method.
9. List any three merits and demerits of Hydraulic mining.
10. List the applicabilitys for underground gasification of coal.

PART—B

10×5=50

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

11. (a) Explain the method of development by blasting-off solid with five headings.

(OR)

(b) Explain the method of development in bord and pillar mining with side discharge loader.

12. (a) Explain diagonal line of extraction and step diagonal line of extraction.

(OR)

(b) Describe the method of extraction of contiguous seams.

13. (a) Explain the method of longwall advancing with sketch.

(OR)

(b) Compare the longwall advancing with longwall retreating.

14. (a) Explain the method of inclined slicing in descending order with Caving.

(OR)

(b) Explain the method of Horizon mining.

15. (a) Explain the Hydraulic breaking of coal.

(OR)

(b) Explain the opening up of coal seams for underground gasification.

PART—C

10×1=10

- Instructions :** (1) Answer the following question.
(2) The question carries **ten** marks.
(3) Answers should be brief and straight to the point and shall not exceed five simple sentences.

16. Explain the precautions against the dangerous of water old working below goaved areas, precautions against fire during and after depillaring.

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