



C20-MNG-402

7461

BOARD DIPLOMA EXAMINATION, (C-20)

OCTOBER/NOVEMBER—2023

DMNG – FOURTH SEMESTER EXAMINATION

UNDERGROUND METAL 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 terms (a) cross-cut and (b) level interval.
2. Describe the term shaft station.
3. State any three merits and demerits of open raising.
4. State any three applicable conditions of breast stoping.
5. List any three merits and demerits of overhand stoping.
6. State any three limitations of open stoping.
7. State any three applicable conditions of shrinkage stoping.
8. Define the term sampling and classify the sampling methods.
9. Define the terms (a) specific humidity and (b) mixing ratio.
10. List any three causes for falling of working efficiency in deep mines.

- 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 division of ore body along the dip by horizons.

(OR)

(b) State the purposes of ore bin, ore chute, winzes and haulage inclines.

12. (a) Explain the two compartmental raising method with a sketch.

(OR)

(b) Explain the Alimak raising method with a sketch.

13. (a) Write the detailed classification of stoping methods in all aspects.

(OR)

(b) Explain the method underhand stoping with a sketch.

14. (a) Explain bulk sampling and state its applicability.

(OR)

(b) Explain the technique of coning and quartering with a sketch.

15. (a) Describe the difficulties associated with strata control in deep mines.

(OR)

(b) State the causes, effects and treatment of a person effected with heat stroke.

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 method of sub-level stoping with a sketch.

★★★