



C14-MNG-602

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**BOARD DIPLOMA EXAMINATION, (C-14)**  
**MARCH/APRIL—2018**  
**DMNG—SIXTH SEMESTER EXAMINATION**  
**ADVANCED OPENCAST 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. List the classification of HEMM deployed in OC mines.
2. List the types of shovels.
3. List the types of draglines.
4. List the applicable conditions of surface miner.
5. List the types of transport systems.
6. List the applications of belt conveyers in OC mines.
7. Define the terms 'slope angle' and 'angle of repose'.
8. State the problems affecting the slope stability.
9. List the factors affecting design of layouts.
10. Define the term 'environment'.

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**PART—B**

10×5=50

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

11. Explain the operation of bucket wheel excavator with neat sketch.
12. Explain the general construction of dragline with neat sketch.
13. Explain general construction of dumper with neat sketch.
14. List the merits and demerits of input crusher technology.
15. State the formula to calculate the factor of safety of bench slope.
16. List and explain the parameters required for slope design.
17. Explain and draw the layout of shovel and dumper combinations in open cast mines.
- \* 18. Explain the prevention and control of air and land pollution due to mining.

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