



PRACTICE SET
End Semester Examination, Spring- 2026

Program: DIPLOMA (MINING)
Semester: IV
Subject: MINING MACHINERY I
Subject Code: 8DPCCMiE204

UNIT I

Section II (10 marks)

1. Explain Locomotive haulage of Diesel locomotive and Battery locomotives writes it applicability & advantage and disadvantage?
2. Describe an endless haulage system. Explain how tubs are attached to the rope?
3. Discuss the following safety devices used in underground mines with diagrams:
 - (a) Stop block,
 - (b) Back stay,
 - (c) Monkey catch,
 - (d) Runaway switch.
4. Describe the all types of safety devices in underground haulage system with neat and clean diagram.
5. Explain the different types of conveyors used in mining. Explain the advantages and disadvantages of belt conveyors.
6. Describe different types of transport system used in underground mines with neat and clean diagram

Section III (20 marks)

7. Sketch and describe all types of rope haulage system used in underground mines.

UNIT II

Section II (10 marks)

8. What are the purpose of winding system? Compare drum winding and friction winding system.
9. Explain the types of guides used in shafts:
 - a) Rigid guides

- b) Flexible (cable) guide
10. Compare drum winding and Koepe winding systems used in underground mines.
 11. Discuss the factors affecting the selection of winding rope.
 12. Explain drum winding system with advantages and disadvantages.
 13. Discuss the advantages, disadvantages, and limitations of Koep winding system in modern mining.

Section III (20 marks)

14. Briefly describe all the safety appliances fitted on a winding system. Draw and explain suspension gear arrangement used for winder?

UNIT III

Section II (10 marks)

15. Differentiate in details between Lang`s Lay and ordinary Lay with neat sketch diagram. ?
16. Briefly discuss about Rope splicing with neat sketch diagram.?
17. Differentiate between standing ropes and running ropes and Write down about care and maintenance of steel wire ropes?
18. Describe the different types of non-stranded ropes used in mining operations.
19. Classify the wire ropes on the basis of operation and construction?
20. Define and explain the following terms:
 - a) Space Factor
 - b) Static Load
 - c) Dynamic Load
 - d) Factor of Safety

Section III (20 marks)

21. Explain in detail the classification, construction and selection criteria of wire ropes used in mining. Include types of deterioration and capping methods. Support your answer with neat diagram wherever necessary.

UNIT IV

Section II (10 marks)

22. Describe the rope splicing procedure and its importance in mining operations.
23. Differentiate Coned socket type capel & Interlocking wedge type capel?
24. While selecting the wire rope which factors be kept in mind as per the priority
25. How the deterioration of rope can be prevented?
26. Briefly describe the rope splicing and its methods used in mines?
27. Explain the reliance capel & its attachment with neat sketch diagram?
28. Describe the considering the selection of wire ropes? Write the ropes used for different purpose?

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Disclaimer: - This is a Practice paper. The Question in End term examination will differ from the Practice paper. This Practice paper is meant for practice only.