

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/
COMMERCIAL PRACTICE, APRIL - 2023**

MATERIAL HANDLING

[Maximum marks: 100]

(Time: 3 Hours)

PART – A

Maximum marks : 10

I (Answer *all* the questions in one or two sentences. Each question carries 2 marks)

1. Define Material Handling.
2. List the common types of hooks used with hoisting equipment.
3. List any two types of industrial lifts.
4. Name any two traction – type conveyors.
5. Define unit load.

(5 x 2 = 10)

PART – B

Maximum marks : 30

II (Answer any *five* of the following questions. Each question carries 6 marks)

1. Define bulk load and how can it be classified.
2. List the factors affecting the flow pattern of materials in an industry.
3. Give the advantages and disadvantages of welded chains.
4. Give the advantages of using steel ropes in hoisting machinery.
5. Give the benefits of using hoisting equipment for material handling.
6. Give the characteristics of a belt-type conveyor.
7. List the benefits of using an AGV for material handling.

(5 x 6 = 30)

PART – C

Maximum marks : 60

(Answer one full question from each unit. Each full question carries 15 marks)

UNIT –I

- III. (a) Give the factors affecting the selection of material handling equipment. (8)
- (b) Explain the principle of working of hoisting mechanism . (7)

OR

- IV.(a) Explain the different methods of stacking (8)
(b) Explain the different types of unit load (7)

UNIT-II

- V.(a) Explain the working of electric lifting magnet (8)
(b) Explain the different kinds of wire ropes used in hoisting machinery. (7)

OR

- VI.(a) Explain the working principle of electromagnetic shoe brakes. (8)
(b) Briefly explain the attachments that can be used for handling loose materials and molten metals. (7)

UNIT-III

- VII. (a) Compare the characteristics of electric and pneumatic hoists (8)
(b) Explain the characteristics and uses of bridge-type crane (7)

OR

- VIII.(a) Explain the principle of working of a differential hoist. (8)
(b) Explain different types of gantry cranes. (7)

UNIT-IV

- IX.(a) List the advantages and disadvantages of hydraulic type conveyors. (8)
(b) Write a short note on Automatic guided vehicle (7)

OR

- X.(a) Write a short note on turn tables and their applications. (8)
(b) Explain the principle of working of vibrating type conveyor. Give its advantages. (7)
