



BRAINWARE UNIVERSITY

Term End Examination 2023-2024

Programme – Dip.ME-2021

Course Name – Material Handling

Course Code - DME505A

(Semester V)

Full Marks : 60

Time : 2:30 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)

1 x 15=15

1. Choose the correct alternative from the following :

- (i) Economy in material handling can be achieved by _____
- a) employing gravity feed movements b) minimizing distance of travel
c) by carrying material to destination without d) all of the mentioned
 using manual labour
- (ii) Identify the correct use Cranes
- a) lifting and lowering b) vertical transportation
c) both 'a' and 'b' d) None of the mentioned
- (iii) Principle of 'Unit load' states that
- a) materials should be moved in lots b) one unit should be moved at a time
c) both 'a' and 'b' d) None of the mentioned
- (iv) used to transfer materials in assembly line in industries.
- a) Belt conveyor b) Industrial truck
c) Bull dozer d) Screw jack
- (v) Select the material handling used in automobile industry
- a) overhead crane b) trolley
c) belt conveyor d) all of the mentioned
- (vi) Select the correct activity of transporting any material from one place to another.
- a) Transportation b) Movement
c) Material handling d) Loading
- (vii) Identify the correct mention condition for pneumatic conveying is done.
- a) High pressure b) Vacuum
c) Fluidization d) Any of the mentioned
- (viii) Select the correct use of camshell grab for lifting

- a) unit loads
c) bulk materials like coal
- (ix) Identify the belt conveyors have low volume carrying capacity.
a) flat belts
c) both A&B
- (x) Traveling down a ramp or inclined _____
a) Back down when loaded
c) Always back down
- (xi) Select essential requirement of a good material handling system is
a) capital cost expenditure
c) saleability of plant and equipment
- (xii) select that can get under a raised load to check it
a) For debris that may fall off
c) Never get under a raised load
- (xiii) Identify the option due to which Forklift accidents may occur.
a) Tips over or falls off loading dock
c) Isn't warming up
- (xiv) Slat belts are made up of ____
a) Wood
c) Metal
- (xv) _____ are used for vertical transportation of aggregates and wet concrete on large project sites.
a) Elevators
c) Conveyors
- b) steel structures
d) steel scrap
- b) troughed belts
d) None of the mentioned
- b) Back up when loaded
d) Use your own judgement
- b) flexibility reduction
d) storing materials utilising minimum space
- b) To be sure that the fork position is correct
d) Whenever you feel it is necessary
- b) Stalls
d) None of the mentioned
- b) Plastic
d) Any of the mentioned
- b) Trucks
d) Escalators

Group-B

(Short Answer Type Questions)

3 x 5=15

2. Name three major components of the robots with their function. (3)
3. write the application of fork lift truck. (3)
4. Define hoisting equipment. (3)
5. Discuss the advantages of using steel wire rope over chain. (3)
6. Explain the application of universal vise. (3)

OR

Explain the application of ball table

(3)

Group-C

(Long Answer Type Questions)

5 x 6=30

7. Differentiate between gravity and powered roller conveyor. (5)
8. Explain the principles of material handling . (5)
9. Compare a passenger conveyor and load conveyor. (5)
10. Recall the applications of material handling equipments with example . (5)
11. Describe the tasks the robots perform and the impact on productivity. (5)
12. Explain the potential challenges and considerations involved in designing such a chute to ensure efficient material flow (5)

OR

Explains the primary purpose of a chute in material handling.

(5)