



MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WEST BENGAL

Paper Code : PE-ME601I/PE-ME602I Material Handling

UPID : 006660

Time Allotted : 3 Hours

Full Marks : 70

The Figures in the margin indicate full marks.

Candidate are required to give their answers in their own words as far as practicable

Group-A (Very Short Answer Type Question)

1. Answer any ten of the following :

[1 x 10 = 10]

- (I) Which mechanism is employed for rotating the boom of a crane?
- (II) What is the alternative name of the Jointed arm Robot?
- (III) The expected life of a light commercial vehicle is nearly _____ KM.
- (IV) Why Fork lift truck is used ?
- (V) For which ribbon screws are used in screw conveyors?
- (VI) From which material crane hooks are generally made of?
- (VII) Why roller conveyors are generally used?
- (VIII) What does 6*7 steel wire rope indicate?
- (IX) _____ cranes can shift the load to any position but within the radius of the crane travel.
- (X) To which material handling equipment the term 'Manipulator' is related?
- (XI) In electric traction, which type of torque is exerted?
- (XII) Chain slings are used for

Group-B (Short Answer Type Question)

Answer any three of the following :

[5 x 3 = 15]

2. What are the Principles of Material Handling? [5]
3. What do you mean by safety principle in materials handling? [5]
4. What do you mean by maintenance principle ? [5]
5. What are the advantages of Pneumatic Conveying ? [5]
6. What are the advantages of unitization of materials ? [5]

Group-C (Long Answer Type Question)

Answer any three of the following :

[15 x 3 = 45]

7. (a) What are the essential requirements & functional scope of a good material handling system ? [8]
(b) What are the requirements of a well designed material handling system ? [7]
8. (a) What is fork lift truck? Write down the features of a fork lift truck. [3+7]
(b) What do you mean by Turning Radius and Aisle Width of a FLT? [5]
9. Describe elaborately about the FLT attachments with neat sketch. [15]
10. (a) Describe about the two-wheel hand truck and platform truck with neat sketches. [4+4]
(b) Describe briefly about the different parts of a belt conveyor. [7]
11. (a) Describe about the capacity rating of a fork lift truck with a neat sketch. [8]
(b) Show the different parts of a fork lift truck with neat sketch. [7]

*** END OF PAPER ***