

**B.Tech. – VIEP – MECHANICAL ENGINEERING
(BTMEVI)**

Term-End Examination

00553

June, 2018

BIMEE-020 : MATERIAL HANDLING

Time : 3 hours

Maximum Marks : 70

Note : Attempt any *five* questions. All questions carry equal marks.

1. (a) Discuss in detail the importance of material handling in industry. 7
- (b) What are the different types of material handling equipments ? Explain their role in material handling. 7
2. (a) What are the criteria for proper selection of material handling equipment ? Explain in detail. 7
- (b) Explain the working of air cushion handling frames with a neat sketch. 7

3. (a) What is counter balancing ? How can it be applied in trucks ? 7
- (b) Explain the working of hand pallet trucks and stackers. 7
4. (a) Discuss about online restricted material handling equipments. 7
- (b) What are the general principles of cargo handling ? Explain. 7
5. (a) Explain the procedural approach to be adopted for the analysis of material handling problems and development of low cost material handling system. 7
- (b) Explain the working of a mobile lifting frame with a neat sketch. 7
6. (a) What is a crane ? Explain the working of jib cranes for transferring material. 7
- (b) "Mechanical handling of materials improves the quality and quantity of manufacture." Discuss. 7

7. Write short notes on any **four** of the following : $4 \times 3 \frac{1}{2} = 14$

- (a) Engineering and Economic Factors of Materials Handling Equipment
 - (b) Warehousing Layouts
 - (c) Conveyors
 - (d) Powered Stackers
 - (e) Material Handling Cost
 - (f) Hydraulic Pallet Truck
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