

B.E. Seventh Semester (Mechanical Engineering) (C.B.S.)
Elective - I : Material Handling System

P. Pages : 2

Time : Three Hours



NKT/KS/17/7473

Max. Marks : 80

- Notes :
1. All questions carry marks as indicated.
 2. Solve Question 1 OR Questions No. 2.
 3. Solve Question 3 OR Questions No. 4.
 4. Solve Question 5 OR Questions No. 6.
 5. Solve Question 7 OR Questions No. 8.
 6. Solve Question 9 OR Questions No. 10.
 7. Solve Question 11 OR Questions No. 12.
 8. Due credit will be given to neatness and adequate dimensions.
 9. Assume suitable data whenever necessary.
 10. Illustrate your answers whenever necessary with the help of neat sketches.
 11. Use of non programmable calculator is permitted.

1. a) Discuss the various objectives and benefits of proper material Handling. **7**
b) Describe the principles of material handling system. **6**

OR

2. a) Explain in brief interrelationships between material handling and plant layout. **7**
b) Classify and compare Various material handling equipment's. **6**
3. a) Describe General analysis procedures of material handling equipment. **7**
b) What is unit load? Explain in detail the concept of unit load with suitable example. **7**

OR

4. a) Explain in detail the various Parameter affecting on packing and storage of material. **7**
b) Discuss economic analysis for designing the component of material handling system. **7**
5. a) Describe in brief rail traveling Components and mechanism. **7**
b) Explain the various design considerations for structures of rotary cranes with fixed radius. **7**

OR

6. a) Explain selecting the motor rating for hoisting mechanism in brief. **7**
b) Describe hand propelled EOT overhead traveling cranes. **7**

7. a) What is load chain? Discuss Various Types of ropes used in Material handling system. 7
b) Explain the factor for designing conveyor belts in brief. 6

OR

8. a) What is grab buckets? Explain in details. 7
b) Explain the various application of load lifting attachment. 6
9. a) Explain in brief the working construction of Bucket elevators. 7
b) Describe the working of Cabin Conveyors. 6

OR

10. a) Explain in brief bulk material handling for material storage. 7
b) Discuss the principle & working of screw conveyor. 6
11. a) Discuss the various factors and indicators for Consideration in warehouse automation. 7
b) What is Computerized ware house planning. Explain in brief. 6

OR

12. a) What are various safety regulations and disciplines in material handling and ware house automations. 7
b) Discuss the term. levels. and means of mechanizations in material handling. 6
