

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-V(New) • EXAMINATION – WINTER 2016

Subject Code:2151505

Date:22/11/2016

Subject Name:Material Handling Systems

Time:10:30 AM to 01:00 PM

Total Marks: 70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

		MARKS
Q.1	Short Questions	14
	1 Define material handling.	
	2 Which of the belt conveyors have low volume carrying capacity?	
	3 Material handling in automobile industry is done by overhead crane. True or False	
	4 Give name any three types of conveyors.	
	5 Define Belt Capacity.	
	6 Give name any three components of belt conveyors.	
	7 Give name any three components of Hoisting Equipment.	
	8 Give any three name of material handling equipments used in various industries.	
	9 Principle of 'Unit load' states that materials should be moved in lots. True or False	
	10 Give list of material handling devices.	
	11 Which belt conveyor prevents sliding down of material at an inclination of 55° with horizontal?	
	12 Give any two types of overhead equipment.	
	13 Give name any two types of jacks.	
	14 Give name any three types of cranes.	
Q.2	(a) Give name of various principles of MH system.	03
	(b) Discuss use of cubic space principle of material handling.	04
	(c) Write note: Screw conveyors	07
	OR	
	(c) Discuss factors affecting the selection of material handling equipment in a production shop.	07
Q.3	(a) Give list of different types of Hoisting equipment.	03
	(b) What are the steps in analyzing material handling problems?	04
	(c) Discuss importance of a good layout for success of material handling system. Take an example of a newspaper printing press.	07
	OR	
Q.3	(a) Discuss why material handling is very important in production.	03
	(b) Discuss unit load concept of material handling.	04
	(c) Describe material handling at workplace. How a workplace layout should be planned?	07
Q.4	(a) Give list of basic types of material handling equipment.	03
	(b) Write note on Roller conveyors.	04

(c) Explain the Computer Aided Systems for Material Handling. **07**

OR

Q.4 (a) Discuss about container used in material handling. **03**

(b) Discuss the modern trends in material handling. **04**

(c) Explain Gantry cranes and Jib cranes with the help of neat sketch. **07**

Q.5 (a) Discuss wire ropes and chains. **03**

(b) Write note on Belt conveyors. **04**

(c) Explain the lifting mechanisms. **07**

OR

Q.5 (a) List out the objectives of the material handling systems. **03**

(b) Discuss pneumatic and hydraulic conveyors. **04**

(c) Explain care and safety in material handling. **07**
