Sea	ıt No.:	Enrolment N	0	
		GUJARAT TECHNOLOGICAL UNIVED M.E. SEMESTER III–EXAMINATION (Remedial)– WIN		
Subject code: 730904			Date: 07/12/2015	
Tin	ne: 2:3	Name: Design of Material Handling Equipments 60 PM to 5:00 PM	Total Marks: 70	
ıns	structi	ions: Attempt all questions.		
		Make suitable assumptions wherever necessary.		
Q.1	(a)	State and explain the basic principles used for designing requipments in detail.		
	<b>(b)</b>	List and brief about various power drives used as drives for ho	oisting gear.	07
Q.2	(a) (b)	(b) Draw a plant layout of material handling equipment in Packaging Industry.  OR		07 07
	<b>(b)</b>	Discuss in detail bucket elevator with sketch.		07
Q.3	(a)	in a conveyor system? Elaborate them.		07
	<b>(b)</b>	Explain the economics of materials handling equipment design <b>OR</b>		07
Q.3	(a) (b)	Elaborate the methods of fastening welded load chains.  What are the favorable characteristics or properties of a belt that is to be used in a conveyor system? Elaborate them.		07 07
Q.4	(a)	Explain the design of an E.O.T. crane main girder (box type) with suitable example.		07
	<b>(b)</b>	Explain the stability analysis of a moveable crane with a neat s  OR	ketch.	07
Q.4	(a) (b)	Explain the design of double sided drum in detail with suitable example. State and explain the different types of magnetic separator used in Belt Conveyor.		07 07
Q.5	(a)	Select a wire rope for a travelling crane with a lifting capacity $Q=10$ tons assuming the rope life equal to 12 months. The load is suspended on four rope parts. Take $a=3400,z_2=3,\beta=0.4,m=0.905,\sigma=24.4kg/mm^2,C=1,C_1=0.97,C_2=1$		07
	<b>(b)</b>	Enlist and explain the main factors affecting the quality of a sto		07
Q.5	(a)	What are the different types of sensor used in Material Handling System? Explain any one of the sensor in the light of its working principle and area of application.		07
	<b>(b)</b>	Give guidelines for selection of wire ropes. How would you of for infinite life?	lesign a wire rope	07

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