GUJARAT TECHNOLOGICAL UNIVERSITY BE - SEMESTER-VI • EXAMINATION – SUMMER 2015

Subject Code: 163505Date: 1				
Subject Name: Solid Wastes- characterization & Treatment Time: 10.30am-01.00pm Total Mari Instructions:				
	1. 2. 3.	Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.		
Q.1	(a) (b)	Discuss the criteria of site selection for hazardous waste landfill. What do you understand by Municipal Solid Waste? Why municipal waste should be kept separate from hazardous and untreated biomedical waste?	07 07	
Q.2	(a)	Discuss Biochemical pathway conversion of solid waste. Explain Anaerobic	07	
	(b)	 digestion of solid waste in detail with the help of suitable diagram. Write short notes on: Factors, influencing the quantity and composition of MSW Issues relating to Management of MSW in India. OR 	07	
	(b)	 Write short notes on: Sustainable management of solid waste Treatment of solid waste through Pyrolysis 	07	
Q.3	(a)	Describe "Municipal Solid Wastes (Management and Handling) Rules, 2000" in detail.	07	
	(b)	Discuss physicochemical conversion of solid waste in detail with the help of suitable example.	07	
Q.3	(a)	OR What do you understand by incineration? Explain the process with suitable diagram; also enlist the advantages and disadvantages of this process.	07	
	(b)	Define and differentiate Incineration, pyrolysis and gasification for treatment of solid waste.	07	
Q.4	(a)	What do you understand by HAZOP? Explain the process with suitable flow	07	
	(b)	 diagram. Write short notes on(any two): Industrial solid Waste Composition of MSW Slaughter house waste management 	07	
Q.4	(a)	Describe Liner Criteria and cover criteria for hazardous waste landfill in detail.	07	
	(b)	 Write short notes on(any two): Vermi-composting Agricultural waste management Hazardous waste 	07	
Q.5	(a)	• What are the Responsibilities of the occupier under "The Hazardous Wastes (Management, Handling & Transboundary movement) Rules, 2008"?	07	

- **(b)** Write short notes on:

 - Aerobic composting of solid wasteLocation criteria for hazardous waste landfill

OR

Q.5	(a)	Can alcohol be produced from solid waste? If yes, explain the process with the	07
	(b)	help of neat diagram. Write short notes on:	07
		• 4R Principle for waste management	-

Control of gas movement with vents in sanitary landfill

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