GUJARAT TECHNOLOGICAL UNIVERSITY

ME - SEMESTER- II(New course) • EXAMINATION (Remedial) - WINTER- 2015

Subject Code: 2723013 Subject Name: Process Safety Management Time: 2:30 pm to 5:00 pm Instructions: Date: 11/12/2015 Total Marks: 70			2015	
			70	
	2.	Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.		
Q.1	(a)	What are different elements of Process Safety Management? Explain any three of them in detail.	07	
	(b)	What is the different control techniques used in the chemical plants?	07	
Q.2	(a)	Explain Hazard and Operability Study (HAZOP) with meaning of all guidelines and GATEs.	07	
	(b)	Write short note on Safety rules & regulations for transportation , storage and handling of hazardous materials	07	
	(b)	OR Explain Foult Tree Analysis method of barand identification	07	
	(b)	Explain Fault Tree Analysis method of hazard identification.		
Q.3	(a) (b)	What is toxicology? What are the essential elements of any toxicology study? What are the three phases involved in any industrial hygiene project? Explain each briefly.	07 07	
		OR	. –	
Q.3	(a)	What is a toxicant? What are the different modes by which a toxicant enters into a human body?	07	
	(b)	Define: a) Risk b) Safety c) Hazard. What are the essential features of any safety program?	07	
Q.4	(a)	Explain process of accident investigation in steps.	07	
	(b)	List different dispersion models and explain any one in detail. OR	07	
Q.4	(a) (b)	Explain: streaming current, Inerting, Flammability diagram. Explain different types of charge accumulation and charge discharge.	07 07	
Q.5	(a)	What is interlock/Tripping system. Explain different types of interlock system. Give one example with proper diagram.	07	
	(b)	What is electrostatic ignition? Discuss methods to prevent electrostatic ignition. OR	07	
Q.5	(a)	What is Ventilation? Explain positive ventilation and negative ventilation with diagram.	07	
	(b)	Write short note on risk management and mitigation.	07	
