Seat	t No.: _			
		GUJARAT TECHNOLOGICAL UNIVERSI	ГҮ	
		B. E SEMESTER – VI • EXAMINATION – WINTER 20	12	
Sul	oject	t code: 160504 Date: 0	5/01/2013	
Sul	bject	t Name: Pollution Control and Safety Management		
	•	·	Marks: 70	
		ctions:		
		. Attempt any five questions.		
		. Make suitable assumptions wherever necessary.		
	3.	. Figures to the right indicate full marks.		
Q.1	(a)	List various cycle present in the Nature. Discuss any one in detail	07	
<b>C</b>	(b)	· · ·		
		substances. Discus analysis of SO <sub>x</sub>		
Q.2	(a)	Discus the evolution of Safety science from 3-M theory to Modern concept of Loss 0		
		Prevention.		
	(b)	· · · · · · · · · · · · · · · · · · ·		
		measured? How does it affect the quality of water? How such water is tro  OR	sated?	
	(b)	<u> </u>	onsidered in 07	
		Factory Act		
Q.3	(a)	What is Fire Triangle? How does it help in curbing accident due to fire in Chemical 0		
		process industry? Discuss with emphasis on various methods of inerting.		
	(b)	* *	doing safety 07	
		audit in continuous chemical process plant.  OR		
Q.3	(a)	Give the stepwise method of performing HAZOP.	07	
	(b)	In an industry regular power is obtained from main power plant. On failure of power 0		
		from main plant power is obtained from alternate grid and upon failure of		
		set is run. Consider a case of power failure in process industry and const		
		Tree' to find when plant operation will fail. Following data are available Incident Occurrence/year	•	
		Failure of power in main $2 \times 10^{-5}$		
		supply		
		Failure of power from 1×10-2		
		alternate Grid Failure of D.G. Set $1 \times 10^{-3}$		
Q.4	(a)	What is off site and on site Emergency Planning. Discus.	07	
	(b)	Discus the issues related to Transport emergency planning. <b>OR</b>	0,	
Q.4	(a)	Discus Pluff and Plume Model for dispersion. How it is useful in case of Toxic		
o 4	<i>a</i> .	release?	0.4	
Q.4	(b)	What are methods to reduce the damage due to release of toxic vapors.		
Q.5	(a)	Discuss the safety considerations to be taken while Designing Storage tank for		
	(b)	Explosive and Volatile material.  Discus different types of Safety Permit. Discus its content and validity	07	
	(0)	OR	0.	
Q.5	(a)	Write on any Two.	07	
	(1.)	Landfill sites (ii) Material safety Data sheet (iii) Incineration	0.0	
	(b)	Write on any Two IBR Act. (ii) Accidents (iii) Rupture discs	07	
		1211110 (II) Horisonia (III) Haptaro albeb		

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