Seat No.:	Enrolment No.
Deal INC.	Tamonican inc.

Subject Name: Pollution Control, Safety & Health Management

Subject Code: 2160504

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER - VI (NEW).EXAMINATION - WINTER 2016

Date: 25/10/2016

		: 10:30 AM to 01:00 PM Total Marks: 70	
I i	nstru	 Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks. 	
Q.1		Short Questions	14
	1	What is the aim of enactment of factories act, 1948?	
	2	Differentiate between child and adult.	
	3	What do you understand by the term 'power'?	
	4	What is transmission machinery?	
	5	Explain hazard.	
	6	What do you mean by the term 'risk'?	
	7	Differentiate between closure and lock-out.	
	8	Explain 'fatal accident rate'.	
	9	What do you understand by fire triangle?	
	10	What is meant by industrial dispute?	
	11	Explain explosion.	
	12	What is smog?	
	13	Who is an employee?	
0.4	14	What is meant by 'prime mover'?	0.2
Q.2	(a)	What are the various natural cycles in environment and ecology? State their	03
	(b)	importance.	04
	(b)	Discuss the role of government and voluntary organizations in controlling	04
	(c)	pollution to protect the environment. State the types of air pollutants. Briefly explain the important methods used for controlling air pollution caused by industries.	07
		OR	
	(c)	What are the various types of solid wastes? Describe the methods used for solid waste disposal.	07
Q.3	(a)	What is the purpose of workmen's compensation act? Where is it applicable?	03
		What are the various health provisions mentioned in factories act, 1948?	04
	(c)	Briefly describe the welfare methods to be provided for workers in the	07
		following: (i) Cement factory; (ii) Coal Mine; (iii) Caustic soda plant. OR	
Q.3	(a)	What is safety audit? Justify the need of safety audit.	03
•	(b)	State and explain the various safety provisions mentioned in industries act, 1948.	04
	(c)	Write a short note on 'industrial electricity act and rules'.	07
Q.4	(a)	What are the basic ingredients of successful safety program?	03
	(b)	Briefly explain the key steps of accident process with an illustration.	04
	(c)	Discuss hazard and operability (HAZOP) studies used to identify hazards in	07
		chemical industries.	
		OR	
Q.4	(a)	Discuss about any three logic transfer components used in a fault tree.	03

	(b)	Briefly explain the various methods and fire extinguishing agents used for	
		controlling or reducing fire.	
	(c)	Discuss the various types of 'plume' and 'puff' models of dispersion for	07
		toxic vapours released into atmosphere.	
Q.5	(a)	A process has a reported FAR of 2. If an employee works a standard 8-hour	03
		shift 300 days per year, compute the deaths per person per year.	
	(b)	Briefly discuss about the blast damage due to over pressure.	04
	(c)	Write a short note on personal protective equipments.	07
		OR	
Q.5	(a)	Discuss about environment impact assessment (EIA) briefly.	03
_	(b)	Explain 'process hazard checklist' with a suitable illustration.	04
	(c)	Write short notes on the following instruments for safety.	07
		(i) Pressure safety valve (ii) Rupture disc.	
