GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VI (NEW) - EXAMINATION - SUMMER 2017

Subject Code: 2160504 Date: 03/05/2017

Subject Name: Pollution Control, Safety & Health Management
Time: 10:30 AM to 01:00 PM
Total Marks: 70

Instructions:

- 1. Attempt all questions.
- 2. Make suitable assumptions wherever necessary.
- 3. Figures to the right indicate full marks.

Q.1		Short Questions	14
•	1	Define hazard.	
	2	What is risk?	
	3	Explain fire triangle.	
	4	What is explosion?	
	5	Who is occupier?	
	6	What do understand by 'extra high voltage'?	
	7	Give one renewable energy resource.	
	8	What do you understand by 'earthing'?	
	9	Define the term 'adult'.	
	10	What is deflagration?	
	11	Differentiate between 'lock-out' and 'strike'.	
	12	Define the term 'power'.	
	13	What is the expansion of EIA?	
	14	What is meant by 'prime mover'?	
Q.2	(a)	'Factories act helps productivity'. Evaluate the statement with respect to relevant provisions of factories act, 1948.	03
	(b)	State and discuss about the basic ingredients of a successful safety	04
	(0)	program.	04
	(c)	State the various natural cycles in environment and ecology and	07
		explain in detail the effects of various human activities on these cycles. OR	
	(c)	Briefly describe the different methods used in controlling particulate	07
	(c)	matter in chemical industries.	
Q.3	(a)	Explain the significance of energy audit in industry.	03
	(b)	On the basis of effect of pollution on environment, justify the need for environmental impact assessment with an illustration.	04
	(c)	State the techniques for hazard identification. Explain hazard and operability (HAZOP) method in detail.	07
		OR	
Q.3	(a)	Briefly explain environment audit.	03
Q.C	(b)	State and discuss briefly about the welfare provisions in factories act, 1948.	04
	(c)	Discuss the various types of 'plume' and 'puff' models of dispersion of	07
0.4	()	toxic vapours released into atmosphere.	0.3
Q.4	(a)	Explain the provisions on safety precautions as specified in electricity rules.	03
	(b)	What is the aim of payment and wages act? Explain how it safeguards	04
		the interest of the workers.	
	(c)	Discuss in detail the various personal protective equipments used in chemical industries and their functions.	07

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OR

Q.4	(a)	With a suitable example, discuss the nature of accident process.	03
	(b)	Explain briefly about on-site emergency control and off-site disaster	04
		management.	
	(c)	Stating the types of fires, explain the methods and fire extinguishing agents used for controlling each class of fires.	07
Q.5	(a)	State the surface water contaminants and briefly explain their impact.	03
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	(b)	Explain safety audit and its significance.	04
	(c)	State different types pressure relief devices. With neat sketches, explain any two of them in detail.	07
		OR	
Q.5	(a)	1 1 2	03
		insurance corporation (ESIC) act.	
	(b)	Briefly explain the procedure adopted for fixing and revising the minimum wages.	04
	(-)		07
	(c)	State the different types of explosions and explain each one in brief.	07
