Seat No.: _____   Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER– IV(NEW) EXAMINATION – SUMMER 2023

Subject Code:3141310   **Date:13-07-2023**
Subject Name:Occupational Health & Safety
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.**
4. **Simple and non-programmable scientific calculators are allowed.**

Q.1	**(a)**	Define: (i) safety (ii) accident (iii) MSDS	**03**
	(b)	State the various routes of entry of toxicants into the human body.	**04**
	(c)	Give the classification of various occupation health hazards.	**07**
Q.2	**(a)**	Draw and explain the pyramid of fire.	**03**
	(b)	Describe the functions of health, safety and environment in an industry.	**04**
	(c)	Describe the 5 E's for accident prevention.	**07**
		OR	
	(c)	Discuss the effects of electrical parameters on human body.	**07**
Q.3	**(a)**	What is pneumoconiosis? List out the types of pneumoconiosis?	**03**
	(b)	State the scientific safety management functions.	**04**
	(c)	Explain application of ergonomics for safety & health.	**07**
		OR	
Q.3	**(a)**	Give the objectives of safety management.	**03**
	(b)	Describe symptoms, diagnosis, treatment and prevention of Silicosis.	**04**
	(c)	Write a short note on constituents of ergonomics.	**07**
Q.4	**(a)**	Enlist the dangerous properties of chemicals.	**03**
	(b)	Discuss the requisite characteristics of personal protective equipment.	**04**
	(c)	What is explosion and give the classification of explosion.	**07**
		OR	
Q.4	**(a)**	What are the factors impending safety?	**03**
	(b)	Give the classification of personal protective equipment.	**04**
	(c)	With the help of table explain classification of fire and extinguishers.	**07**
Q.5	**(a)**	Define: (i) LC_{50} (ii) TLV (iii) hazard	**03**
	(b)	Explain preliminary hazard analysis.	**04**
	(c)	Write a short note on on-site emergency plan.	**07**
		OR	
Q.5	**(a)**	Define: (i) LD_{50} (ii) STEL (iii) risk	**03**
	(b)	Write the procedure to carry out HAZOP in brief.	**04**
	(c)	Differentiate between: (i) HAZAN & HAZOP (ii) FTA & ETA	**07**

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