Seat No.: _____   Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER–I (NEW) EXAMINATION – WINTER 2023

Subject Code:3110007   **Date:20-01-2024**
Subject Name:Environmental Sciences
Time:02:30 PM TO 05:00 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)**	Briefly discuss the various types of environmental pollutions.	**03**
	(b)	Describe the various components of environment.	**04**
	(c)	Discuss the significance of environmental sciences to the different engineering disciplines.	**07**
Q.2	**(a)**	Suggest some ways to convert wastes to resources.	**03**
	(b)	Describe the concept of sustainable development.	**04**
	(c)	Explain the various effects of air pollution on plants, property and human beings.	**07**
		OR	
	(c)	Describe different methods of solid waste collection and explain the hazards associated with improper handling of the solid waste.	**07**
Q.3	**(a)**	Discuss the advantages of calculating carbon footprints.	**03**
	(b)	Describe the concept of eutrophication.	**04**
	(c)	Write a short note on ozone layer depletion.	**07**
		OR	
Q.3	**(a)**	Explain the concept of clean development mechanism.	**03**
	(b)	Discuss the various effects of water pollution.	**04**
	(c)	Write a short note on global warming due to green house gases.	**07**
Q.4	**(a)**	Define biomedical waste and list out the various sources of biomedical waste.	**03**
	(b)	Give the classification of air pollutants.	**04**
	(c)	Explain the various fundamental principles of green building.	**07**
		OR	
Q.4	**(a)**	Define e-waste and list out the various sources of e -waste.	**03**
	(b)	State the Indian ambient air quality standards.	**04**
	(c)	Explain in detail the different green building rating systems.	**07**
Q.5	**(a)**	Briefly explain the smart cities development in India.	**03**
	(b)	List out the various sources and effects of noise pollution.	**04**
	(c)	Describe the various applications of the 4R principle.	**07**
		OR	
Q.5	**(a)**	Differentiate between sound and noise.	**03**
	(b)	List out the core infrastructure elements of smart city.	**04**
	(c)	Explicate the 4R concept.	**07**

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