

# GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-I & II (NEW) EXAMINATION – SUMMER 2024

Subject Code:3110007

Date:04-07-2024

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) Define environmental pollution. **03**  
(b) Write a short note on components of environment. **04**  
(c) Explain the importance of environmental science subject in various engineering disciplines. **07**

- Q.2** (a) Discuss the need of sustainable development. **03**  
(b) Define & Explain: **04**  
(i) Ecosystem (ii) Noise pollution (iii) Ecology (iv) Environmental degradation  
(c) Difference between sound & noise. Discuss sources & effects of noise pollution. **07**

**OR**

- (c) How the various environmental pollutants effect on the global climate and also suggest some ways to mitigate it. **07**

- Q.3** (a) Give the classification of biomedical waste. **03**  
(b) Explain the causes and effects of water pollution. **04**  
(c) Discuss the various sources of air pollution and also give the classification of air pollutants. **07**

**OR**

- Q.3** (a) Enlist the different sources of biomedical waste. **03**  
(b) Write a short note on eutrophication. **04**  
(c) Explain the effects of air pollution on plants, human beings and property. **07**

- Q.4** (a) Define e-waste and list out the various sources of e -waste. **03**  
(b) Enlist & explain the factors affecting municipal solid waste generation. **04**  
(c) Discuss the ozone layer depletion phenomena in details. **07**

**OR**

- Q.4** (a) Give the sources and types of solid waste. **03**  
(b) Discuss the impact of e-waste on environment and human health. **04**  
(c) Describe the greenhouse effect and global warming. **07**

- Q.5** (a) Define green building and state its objectives. **03**  
(b) Describe the concept of 4R's. **04**  
(c) Explain the various fundamental principles of green building. **07**

**OR**

- Q.5** (a) Write a brief note on concept of smart city. **03**  
(b) Describe the applications of 4R principle with example. **04**  
(c) Explain in detail the different green building rating systems. **07**