

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-I &II (NEW) EXAMINATION – SUMMER-2019****Subject Code: 3110007****Date: 15/06/2019****Subject Name: Environmental Sciences****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.

		Marks
<b>Q.1</b>	(a) Why environmental education is necessary in engineering curriculum?	<b>03</b>
	(b) Describe briefly various types of pollutions.	<b>04</b>
	(c) What are the sources of water pollution? Discuss the effects of water pollution.	<b>07</b>
<b>Q.2</b>	(a) Discuss the impact of technology on environment.	<b>03</b>
	(b) State the Indian Ambient air quality standards.	<b>04</b>
	(c) Enlist common air pollutants. Discuss the sources and effects of any three air pollutants.	<b>07</b>
<b>OR</b>		
	(c) What is noise pollution? Describe the sources and effects of noise pollution.	<b>07</b>
<b>Q.3</b>	(a) Justify the statement “biomedical wastes are to be segregated before disposal”.	<b>03</b>
	(b) What is e-waste? Explain the methods to manage e-waste.	<b>04</b>
	(c) What is global warming? Why is it considered to be one of the major global environmental issues?	<b>07</b>
<b>OR</b>		
<b>Q.3</b>	(a) Explain the importance of sustainable development.	<b>03</b>
	(b) What are the causes and effects of acid rain?	<b>04</b>
	(c) Describe different methods of solid waste collection and explain the hazards associated with improper handling of this waste.	<b>07</b>
<b>Q.4</b>	(a) Enlist various green house gases and discuss the effects of any one on environment.	<b>03</b>
	(b) Explain green building technology and state its objectives.	<b>04</b>
	(c) What do you understand by Clean Development Mechanism (CDM)? Discuss its objectives, advantages and limitations.	<b>07</b>
<b>OR</b>		
<b>Q.4</b>	(a) Discuss the advantages of calculating carbon footprints.	<b>03</b>
	(b) Enlist different green building rating systems and explain any one in detail.	<b>04</b>
	(c) Discuss the international initiatives for mitigating global environmental issues.	<b>07</b>
<b>Q.5</b>	(a) What do you understand by 4R’s.	<b>03</b>
	(b) Suggest some ways to convert wastes to resources.	<b>04</b>
	(c) Explain the concepts of smart cities with suitable example.	<b>07</b>
<b>OR</b>		
<b>Q.5</b>	(a) Discuss the benefits of green buildings.	<b>03</b>
	(b) Describe briefly about smart cities development in India.	<b>04</b>
	(c) Explain the principles of 4R’s and describe how these principles are applicable to control environmental pollution.	<b>07</b>