

GUJARAT TECHNOLOGICAL UNIVERSITY

BE- SEMESTER-VII (NEW) EXAMINATION – WINTER 2020

Subject Code:2170409**Date:28/01/2021****Subject Name:Environmental Biotechnology****Time:10:30 AM TO 12:30 PM****Total Marks: 56****Instructions:**

1. Attempt any FOUR questions out of EIGHT questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

	MARKS
Q.1 (a) Explain the term – phytoremediation.	03
(b) Discuss reforestation through micropropagation.	04
(c) Give an overview of contribution that environment biotechnology can make to society.	07
Q.2 (a) What is the cleaner technology?	03
(b) Give the meaning of the terms: a) skimming b) lagooning	04
(c) Write the steps showing treatment strategies in Slaughter houses.	07
Q.3 (a) How do membrane bioreactors?	03
(b) Give the meaning of the terms: a) Eutrophication b) aeration.	04
(c) Discuss the process of biogas formation.	07
Q.4 (a) In what ways, microbes improve soil fertility?	03
(b) Write the functions of bioscrubbers.	04
(c) Write a note on: Upflow anaerobic sludge reactor.	07
Q.5 (a) Explain aerobic degradation of wastewater.	03
(b) Comment on the Eco-friendly strategy to check soil borne diseases.	04
(c) Compare wet and dry anaerobic fermentation process operations of waste fractions.	07
Q.6 (a) How development of stress tolerant plants can restore degraded lands?	03
(b) Write a note on ISO 9000.	04
(c) Represent the sequence of processes how the diffusion of pollutants and microbial degradation occurs in a biological waste gas cleaning system.	07
Q.7 (a) What is the use of Genetically Engineered Microbes (GEMs) for bioremediation of PAH?	03
(b) State the role of <i>Casuarina</i> species plants during reforestation.	04
(c) Write a note on naturally occurring plants for phytoremediation.	07
Q.8 (a) What is GMO? Exemplify.	03
(b) Explain eco-friendly strategy to check soil borne diseases.	04
(c) Write a note on Transgenic plants for Phytoremediation.	07
