

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI (NEW) EXAMINATION – WINTER 2017****Subject Code: 2160509****Date: 16/11/2017****Subject Name: Biotechnology****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.

		MARKS
Q.1*	(a) Write down the step involved in gene cloning.	03
	(b) Write down the various application of rDNA technology.	04
	(c) Define the biotechnology. Discuss the scope and importance of biotechnology in chemical industries.	07
Q.2	(a) What are applications of monoclonal antibodies.	03
	(b) Write down a short note on genome map.	04
	(c) Explain any one method of biogas production.	07
	OR	
	(c) What are the benefits from IPR. Explain briefly.	07
Q.3	(a) Define pollutant. What are the sources of water pollution?	03
	(b) How the water pollution can be controlled? Discuss with appropriate method.	04
	(c) Briefly discuss the production of Biodiesel?	07
	OR	
Q.3	(a) What are the problems from IPR?	03
	(b) Discuss the types of bioremediation.	04
	(c) Draw a schematic diagram of wastewater treatment plant and discuss biological treatment of waste water.	07
Q.4	(a) What is aerobic and anaerobic treatment?	03
	(b) What is landfill? Write down advantage and disadvantage of landfills.	04
	(c) Briefly describe the production of SCP.	07
	OR	
Q.4	(a) What are the features of biofuels?	03
	(b) What is biomass? How it can be utilize for agriculture field.	04
	(c) Discuss the use of enzymes in different industries.	07
Q.5	(a) What are the applications of micropropagation?	03
	(b) Write a short note on DNA fingerprinting.	04
	(c) Discuss the step involved in cheese production.	07
	OR	
Q.5	(a) Write a short note on Cancer.	03
	(b) How the vaccine can be produced. Explain.	04
	(c) Define plant tissue culture. Discuss various techniques of plant tissue culture.	07
