Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VI (OLD) - EXAMINATION – SUMMER 2017

Subject Code: 161304			Date: 03/05/2017	
Ti	me: tructi 1 2	t Name: Biological Process for Wastewater Treatment 10:30 AM to 01:00 PM Total Marks: ons: Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	70	
Q.1	(a)	Explain Biochemistry of Carbohydrates.	07	
	(b)	Explain the objectives of biological treatment	07	
Q.2	(a) (b)	Explain BOD equation and factors affecting the BOD test. Explain the Role of microorganism in wastewater treatment. OR	07 07	
	(b)	Explain photosynthesis and symbiosis.	07	
Q.3	(a)	Write the Difference Between (1) Suspended Growth & Attached Growth Process (2) Aerobic & Anaerobic Treatment Process	07	
	(b)	Explain activated sludge process in detail. OR	07	
Q.3	(a) (b)	Explain Working of Rotating Biological Contractor with a neat sketch. Define the following terms. 1) Specific growth rate 2) Yield co-efficient 3) Endogenous decay co-efficient 4) Maximum substrate utilization rate constant	07 07	
Q.4	(a) (b)	Enlist & explain the factors affecting the Anaerobic Treatment. Discuss Anaerobic treatment process steps in detail. OR	07 07	
Q.4	(a) (b)	Enlist the Different types of Natural Treatment Systems & Describe any Two. Differentiate between the Oxidation Ditch & oxidation Ponds.	07 07	
Q.5	(a) (b)	Explain different types of aeration systems. Enlist & Explain the Special Problems of Waste Water Treatment Specific to Small Communities.	07 07	
Q.5	(a)	OR Write a short note: wastewater treatment package plants	07	
.	(b)	Explain the procedure to calculate the value of ultimate BOD and rate constant using Thomas method.	07	
