Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

PDDC - SEMESTER– IV • EXAMINATION – SUMMER 2015

Subject Code: X40601 **Date: 28/05/2015**

Subject Name: ENVIRONMENTAL ENGINEERING

Time:10.30am-01.00pm **Total Marks: 70**

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	**(a)**	Explain the different factors affecting water demand.	**07**
	(b)	Enlist different methods of population forecast. Explain any Two methods in detail.	**07**
Q.2	**(a)**	What is Intake Structure? Explain the factors affecting the site selection for an intake structure.	**07**
	(b)	Explain settling if discrete settling in detail with sketch.	**07**
		OR	
	(b)	Differentiate between slow sand filter and rapid sand filter.	**07**
Q.3	**(a)**	Explain coagulation flocculation process. Explain the procedure for design of a flocculator.	**07**
	(b)	State and explain different methods used for disinfecting water.	**07**
		OR	
Q.3	**(a)**	Explain any TWO layout of distribution network with their merit and demerits.	**07**
	(b)	Explain different methods of water distribution with sketch.	**07**
Q.4	**(a)**	What is meant by Design Period? State design periods for various components of wastewater treatment plant for a city.	**07**
	(b)	Classify different types of Sewers. Explain any Two sewers in details.	**07**
		OR	
Q.4	**(a)**	Enlist various types of sewer appurtenances and explain any One in detail.	**07**
	(b)	Draw a net sketch if domestic wastewater treatment plant. Write functions of each unit.	**07**
Q.5	**(a)**	Explain “Activated Sludge Process” with sketch.	**07**
	(b)	Explain with neat sketch septic sketch and state its design criteria.	**07**
		OR	
Q.5	**(a)**	Write a Short note on “ Sludge Digester”.	**07**
	(b)	Enlist different tertiary treatment of wastewater. Explain any one detail.	**07**

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