Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY BE - SEMESTER- V • EXAMINATION – WINTER 2016

Subject Code:151302 Subject Name: Advanced Environmental Instrumentation			Date: 24/11/2016	
Tiı	me: 1 tructio	0:30AM – 01:00PM Ons: Attempt all questions. Make suitable assumptions wherever necessary.	s: 70	
Q.1	(a) (b)	Derive and explain Lambert's and Beer's law. Write the sources of turbidity in river water. What is significance of turbidity?	07 07	
Q.2	(a) (b)	Explain the working principle and operation of each unit of HPLC with sketch. Explain working of pH meter.	07 07	
	(b)	OR Write the working principle of Ion Selective meter.	07	
Q.3	(a) (b)	Explain the merits and demerits of the gas chromatograph. Write short note on HPLC with its application. OR	07 07	
Q.3	(a) (b)	What is chromatography? Explain stationary phase in chromatography. Write short note on fundamental principles of Spectroscopy.	07 07	
Q.4	(a) (b)	Write short note on "Accuracy and Precision". Write a short note on Mass Spectroscopy. OR	07 07	
Q.4	(a) (b)	Write the working principle of TOC analyzer. Explain its different parts. Write short note on Nephelo Turbidity Meter with neat sketch.	07 07	
Q.5	(a) (b)	Write a short note on Bio-Assay test. Write a short note on Conductivity Meter. OR	07 07	
Q.5	(a) (b)	Write the working principle of Flame Photometer. Explain the terms with examples (i) Standard deviation (ii) Relative deviation.	07 07	
