Seat No.:	Enrolment No.
-----------	---------------

Subject Code: 151302

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-V • EXAMINATION - SUMMER • 2015

Date: 05/05/2015

Subje	ect I	Name: Advanced Environmental Instrumentation.	
•		2.30pm-05.00pm Total Marks:	70
Instru		• •	
		Attempt all questions.	
		Make suitable assumptions wherever necessary.	
		Figures to the right indicate full marks.	
Q.1	(a)	Explain "Conductivity Meter" with neat sketch.	07
	(b)	Write the working principle of Flame Photometer and explain working of	07
		each part with neat sketch.	
$\mathbf{Q.2}$	(a)	What is the difference between Instrumental and visual method for Turbidity	07
		measurement.	
	(b)	What is difference between stationary phase chromatography and mobile	07
		phase chromatography	
		OR	
	(b)	Explain Jackson Candle Turbidity Meter with neat sketch.	07
0.3	()		0=
Q.3	(a)	1 10	07
	(b)		07
0.0		OR	^ =
Q.3	(a)	1 1	07
	(b)	Explain Lambert's and Beer's law.	07
0.4			Λ=
Q.4	(a)		07
	(3.)	sketch	~ =
	(b)		07
0.4		OR	4.4
Q.4	(a)		14
		(i) Standard Deviation and Relative deviation	
		(ii) Accuracy and Precision	
		(iii) Inderminate Error and Determinate Error	
		(iv) Constant Error and Prpportionate Error	
		(v) Measured Value and True value	
		(vi) Absolute Error and relative error	
		(vii) Mean and median	
Q.5	(a)		07
	(b)	<u> </u>	07
		OR	
Q.5	(a)	C	07
		: 0.0512,0.0517,0.0521,0.0508. Calculate the mean and relative average	
		deviation of these results in mg/L.	
	(b)	Write the working principle of TOC analyzer. Draw a neat sketch of TOC	07
		analyzer.	
