GUJARAT TECHNOLOGICAL UNIVERSITY

Date:11/05/2016

BE - SEMESTER-VI- EXAMINATION - SUMMER 2016

Subject Code:161705

Subject Name:Instrumentation Measurement - II Time: 10:30 AM to 01:00 PM Instructions: 1. Attempt all questions. 2. Make suitable assumptions wherever necessary. 3. Figures to the right indicate full marks.			70
Q.1	(a) (b)	Describe paramagnetic oxygen analyzer. Explain glass electrodes in detail.	07 07
Q.2	(a) (b)	Explain principle, working and application of mass spectrometer Explain any two vibration measurement application. OR	07 07
	(b)	Explain in detail construction and working of cone and plate viscometer and parallel plate viscometer	07
Q.3	(a) (b)	Explain various techniques of electronic length measurement. Explain Flame photometric detector (FPD) with its schematic, operation, limitation, benefits and application OR	07 07
Q.3	(a)	Illustrate viscosity is one of the qualitative parameter in process instrumentation. Explain one of the suitable measuring techniques for liquid viscosity.	07 07
	(b)	Explain measurement of force using piezoelectric transducer	
Q.4	(a)	List the moisture measurement technique. Explain conductivity technique for moisture measurement in textile and paper industry.	07
	(b)	Explain NMR Spectroscopy.	07
		OR	
Q.4	(a) (b)	Explain paper chromatography and thin-layer chromatography Explain basic principle of UV and visible type absorption spectroscopy. Draw and describe any one with its schematic.	07 07
Q.5	(a)	Give two differences between bonded and unbounded strain gauge. Explain semiconductor gauge in detail.	07
	(b)	What is chromatography? Explain Gas chromatography in detail. OR	07
Q.5	(a) (b)	What is moisture? Explain moisture measurement. What are IR waves? Explain IR spectroscopy.	07 07
