

GUJARAT TECHNOLOGICAL UNIVERSITY**B.PHARM. - SEMESTER- V • EXAMINATION – SUMMER-2016****Subject Code: 2250003****Date: 04/05/2016****Subject Name: Pharmaceutical Analysis - III****Time: 2:30 PM to 5:30 PM****Total Marks: 80****Instructions:**

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

Q.1	(a) Explain origin of UV spectroscopy.	06
	(b) Enlist radiation source used in UV spectroscopy and discuss any one in detail.	05
	(c) Write a note on photometric titration.	05
Q.2	(a) Explain auxochrome, molar absorptivity and quencher	06
	(b) Describe properties of EMR.	05
	(c) Explain calibration of UV –Vis spectrophotometer as per IP	05
Q.3	(a) Explain principle of mass spectroscopy.	06
	(b) Enlist different mass analyzers and discuss quadrupole mass analyzer.	05
	(c) Discuss fragmentation rule of mass spectroscopy.	05
Q.4	(a) Describe sample handling techniques used in IR spectroscopy.	06
	(b) Write a short note on FT-IR	05
	(c) Enlist detectors used in IR spectroscopy and explain any one in detail.	05
Q.5	(a) What is fluorescence? Discuss factors affecting fluorescence intensity.	06
	(b) Draw a labeled diagram of spectrofluorimeter.	05
	(c) Write a difference between UV and IR spectroscopy.	05
Q.6	(a) Write the difference between AAS and AES	06
	(b) Explain principle of flame photometer.	05
	(c) Write a note on Hollow cathode lamp.	05
Q.7	(a) Explain fundamental principle of NMR spectroscopy.	06
	(b) What is chemical shift? Why TMS is used as reference compound in NMR.	05
	(c) Write a short note on C13 NMR.	05
