Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY B.Ph. - SEMESTER-VII • EXAMINATION – SUMMER-2022

Subject Code: BP701TP Date: 01/06/2			
Time Instru 1. 2.	e: 02 actions Atte Mal	Name: Instrumental Method of Analysis :30PM TO 05:30PM s: empt any five questions. ke suitable assumptions wherever necessary. ures to the right indicate full marks.	
٥.	1.15		
Q.1	(a) (b) (c)	State and derive Beer-Lambert's Law Write applications of UV-Spectrophotometry Describe the factors affecting fluorescence	06 05 05
Q.2	(a)	Explain the terms (i) Auxochromes (ii) Singlet, doublet and triplet electronic	06
	(b)	states (iii) Quenching Explain the principle of flame photometry. What are the applications of flame photometry?	05
	(c)	Explain the different modes of vibrations in poly atomic molecules	05
Q.3	(a)	Write a brief note (i) Instrumentation of atomic absorption spectroscopy (ii) Nephelometry	06
	(b)	Explain the working principle of Michelson Interferometer. What are the advantages of FTIR?	05
	(c)	Give advantages and disadvantages of adsorption chromatography	05
Q.4	(a)	What are the types of paper chromatography? Give the applications of paper chromatography in pharmaceutical science	06
, ,	(b) (c)	Explain Rf value. Describe the working principle of thin layer chromatography Write a brief note on resins used in ion exchange chromatography	05 05
Q.5	(a)	Give a brief account on (i) Capillary electrophoresis (ii) Factors affecting electrophoretic mobility	06
	(b)	Explain the basic principle of affinity chromatography. Enumerate its applications	05
	(c)	Explain the instrumentation of gel chromatography	05
Q. 6	(a) (b) (c)	Explain the terms (i) HETP (ii) Tailing (iii) Resolution Give brief account on columns used in HPLC Discuss about Derivatisation in gas chromatography	06 05 05
Q.7	(a) (b) (c)	Give brief account on (i) Photomultiplier tube (ii) Applications of HPLC Describe the sample handling in IR spectroscopy Draw the schematic diagram of the Flame Ionization Detector. What ate the advantages of gas chromatography?	06 05 05
