

Enrollment No: \_\_\_\_\_

Exam Seat No: \_\_\_\_\_

# C.U. SHAH UNIVERSITY

## Winter Examination-2021

**Subject Name: Instrumental Method of Analysis - Theory****Subject Code: BP701T****Branch: B.Pharm****Semester: 7****Date: 13/12/2021****Time: 11:00 To 02:00****Marks: 75**

Instructions:

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
- (2) Instructions written on main answer book are strictly to be obeyed.
- (3) Draw neat diagrams and figures (if necessary) at right places.
- (4) Assume suitable data if needed.

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<b>Q-1</b>	<b>Attempt the following questions:</b>	<b>(20)</b>
	a) Define Retention time and HETP.	2
	b) Give the principle of AAS.	2
	c) Define Chromophores and Auxochromes with example.	2
	d) Write a note on Ion Exchange Resins.	2
	e) Define $R_f$ and $R_x$ Value.	2
	f) Give the ideal Property of Adsorbent used in Chromatography.	2
	g) Give the application of Affinity Chromatography.	2
	h) Describe the Packing of Column.	2
	i) Write a note on Hollow Cathode Lamp.	2
	j) Give Principle of Gas Chromatography.	2

**Attempt the following questions:**

<b>Q-2</b>	<b>Attempt any two of following :</b>	<b>(20)</b>
<b>A</b>	Draw a schematic diagram of UV Spectrophotometer and explain its Detector in detail.	10
<b>B</b>	Write a detail note on HPLC.	10
<b>C</b>	Discuss the practical requirement of Paper Chromatography.	10
<b>Q-3</b>	<b>Attempt any Seven of following :</b>	<b>(35)</b>
<b>A</b>	Derive Beer's Lambert Law.	5
<b>B</b>	What are the different types of vibrations? Explain in detail.	5
<b>C</b>	Define quenching and explain the types in detail.	5
<b>D</b>	Explain Jabolsinki diagram.	5
<b>E</b>	Discuss about derivatization in gas chromatography.	5
<b>F</b>	Write a note on Gel Chromatography.	5
<b>G</b>	Explain any two Detector used in GC along with diagram.	5
<b>H</b>	Describe various methods of preparing plate in TLC	5
<b>I</b>	Enlist detector used in IR and explain any two in detail.	5

