Enrollment No: _____ Exam Seat No: _____

C.U. SHAH UNIVERSITY

Summer Examination-2022

Subject Name: Modern Pharmaceutical Analytical Techniques
Subject Code: MPH101T **Branch: M.Pharm (Pharmaceutics)**
Semester: 1 **Date: 21/04/2022** **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.

Q-1 **Attempt the following questions:** **(20)**

a)	What is Coupling Constant.	**2**
b)	Give difference between AAS and AES	**2**
c)	Define Quenching and give its types	**2**
d)	Name the difference pump used in HPLC.	**2**
e)	Define Bathochromic shift and Hypsochromic shift.	**2**
f)	What do you mean by R_f and R_x Value.	**2**
g)	Define Mother ion peak and Daughter ion Peak.	**2**
h)	Give principle of Coloumn Chromatography.	**2**
i)	Name the detectors used in GC.	**2**
j)	What do you mean by Bioluminescence.	**2**

Attempt the following questions:

Q-2 **Attempt any two of following :** **(20)**

A	Draw a Schematic diagram of double beam UV Spectrophotometer and explain detectors in detail.	**10**
B	Explain ionization technique used in Mass Spectroscopy.	**10**
C	Give a note on C13 NMR.	**10**

Q-3 **Attempt any Seven of following :** **(35)**

A	Explain electronic transtitions in detail.	**5**
B	Derive Braggs Law.	**5**
C	Explain different molecular vibration in IR	**5**
D	Give a note on ELISA.	**5**
E	Explain Jabolsinki diagram in detail.	**5**
F	Write a note on developing technique used in Paper Chromatography.	**5**
G	Describe factors affecting Chemical Shift.	**5**
H	Explain gel chromatography in detail.	**5**
I	Derive Lamberts beers law.	**5**