



BRAINWARE UNIVERSITY

Term End Examination 2022 Programme – B.Pharm-2019 Course Name – Instrumental Methods of Analysis Course Code - BP701T (Semester VII)

Full Marks: 75

[The figure in the margin indicates full marks. Candidates are required to give their answers in their

own words as far as practicable.]

Group-A

(Multiple Choice Type Question) 1 x 20=20 1. Choose the correct alternative from the following: (i) select the wavelength used to detect low-Pressure Mercury lamp Liner Radiation. b) 700nm a) 254nm c) 800nm d) 600nm (ii) select the correct option in Modern UV Sample cell or Cuvette made up of? a) Glass b) Plastic c) Quartz d) Cobalt (iii) Choose the correct wavelength range corresponding to UV-Visible region? a) 400-800nm b) 200-800nm c) 25µm-2.5µm d) 2.5 μm-1mm (iv) Determine in UV-Visible Spectrophotometry if we take fifty percent of fifty ppm and add the remaining fifty percent with distilled water what is the exact ppm solution we obtained a) 100ppm b) 50ppm c) 25ppm d) 10ppm (v) Predict the testing of flame photometry on ignition of lithium we observe a) red b) yellow c) lime green d) violet (vi) Predict the testing of flame photometry on ignition of potassium we observe. a) yellow b) violet d) red c) lime green (vii) select the best out of it, in turbidometry we analyze a) insoluble particles with respect to b) soluble particles with respect to transmittance scattering c) metals d) absorbance (viii) choose the best out of it, on the effect of solvents on absorption maxima in

b) H2SO4

d) NaOH

paracetamol we dissolves with

a) HCl

c) Boric acid

(ix) Identify the best out of it, in percentage purity	calculation is also known as.	
a) normality	b) linearity	
•	d) assay	
(x) simulate the following Partition Coefficient other	er than titration we do that by using	
a) HPLC	b) GC	
c) IR	d) UV	
(xi) Identify the correct option On increasing PH, Ph	nenol shows	
•	b) Hypsochromic shift	
•	d) Both A&C	
(xii) PREDICT THE FOLLOWING IN CORRECT ASCEND	ING ORDER FROM INITIAL LEVELS	
•	b) SOLUBILITY, TLC, MOISTURE	
CONTENT, TLC, ASSAY	CONTENT, MELTING POINT, ASSAY	
c) HPLC, GC, IR, LCMS, PAPER CHROMATOGRAPHY	d) GC, IR, SOLUBILITY, HPLC, MELTING P	OINT
(xiii) Predict errors in HPLC		
	b) out of mobile phase	
	d) all of these	
(xiv) predict the errors in the assay by using UV-Visib	ole spectrophotometry	
a) different diluents	b) increase pH	
c) none of these	d) all of these	
(xv) separate the odd one out in a UV-Visible spectr	ophotometer	
a) Quartz	b) frit	
· ·	d) grating	
(xvi) Observe that in which of the following is resport intensity of a compound except	isible for increasing of fluorescence	
	b) Planarity	
	d) Dissolved oxygen	
(xvii) Identify in atomic absorption spectroscopy ioni	· · · · · · · · · · · · · · · · · · ·	
by addition of ?		
a) EDTA	b) Cryolite	
•	d) Lanthanum chloride.	
(xviii) Choose the correct sequence of flame photometry?		
	b) Sample residue > Ground state > Exci	ted
Return in ground state > Emission of	state > Emission of radiation	
radiation c) Emission of Radiation > Excited state >	d)	
Ground state > Sample residue.	all of the statements are incorrect	
(xix) Determine in atomic absorption spectroscopy t	he most strongly absorbed light is	
called as ?		
a) Resonance line.	b) Base line	
•	d) Anti stokes line	
(xx) Identify the fluorescence intensity depends on	all of the following except	
•	b) Polarity	
c) Path length	d) Intensity of incident radiation	
Group	n_R	
(Short Answer Typ		5 x 7=35
(3-3-3-3-7)	,	
2. Differentiate about Gas chromatography and thin I	ayer chromatography	(5)
3. describe about electrophoresis?		(5)
4. Determine the equation A=ECL.		(5)
5. Explain about the derails of resolution, asymmetric factor, capacity factor, Theoretical plate		e (5)
as a HPLC peak parameters 6. write in detail the compare between Atomic Spectroscopy and Llv. visible spectroscopy		(5)
6. write in detail the compare between Atomic Spectroscopy and Uv- visible spectroscopy (!		()

7. Describe the principle and various gels used in Gel Electrophoresis. (5) OR Describe about Quenching? Enumerate the various factors which influence quenching (5) effect. 8. Write the advantages and disadvantages of TLC over paper chromatography? (5) Write the events that occur when the compound of a metal to be investigated is aspirated (5) into a flame? **Group-C** (Long Answer Type Questions) 10 x 2=20 9. Compare and differentiate thin-layer chromatography vs radial paper chromatography in (10)10. Distinguish briefly about different factors, which influences the fluorescence intensity. (10)Illustrate schematically the principle, working and instrumentation of Atomic Absorption (10)Spectroscopy.
