SM-44

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Seat No.	29339

B.Sc. (Part-III) (Semester-V) (CBCS) Examination, October - 2023

CHEMISTRY

Analytical Chemistry (Paper-XII)

Sub. Code : 79685

Day and Date :Monday 30 - 10- 2023 **Total Marks : 40**

Time : 10.30 a.m. to 12.30 p.m.

Instructions :
1) **All questions are compulsory.**
2) **Figures to the right indicate full marks.**
3) **Draw neat labeled diagrams wherever necessary.**

Q1) Select most correct alternative among those given below and rewrite the sentence. **[8]**

a) An eluent releases the most strongly held bands on a column at _____

i) in between ii) end

iii) beginning iv) any way

b) For pH determination, the quinhydrone electrode works satisfactorily at _____pH values.

i) zero ii) high

iii) low iv) both i and ii

c) If ultraviolet light is used in the colorimetric measurement, the vessels or other optical parts of the system must be made of _____

i) quartz ii) corning glass

iii) borosil iv) glass

d) In good flame photometers _____detectors are used which produce an electrical signal from the radiation falling on them.

i) photomultiplier ii) photocell

iii) both i and ii iv) photoframe

P.T.O.

e) The amount of substance in its saturated solution in any solvent at given temperature is called as _____ in that solvent.

i) molarity ii) solubility

iii) solubility product iv) pH

f) Water present on the surface of principate is called as ____

i) water of hydration ii) sorbed water

iii) occluded water iv) adsorbed water

g) Linear or cross linked polystyrene resin having - SO_3H group is used as _____

i) Strong cation exchanger ii) adsorbent

iii) anion exchanger iv) cation reducer

h) _____burner is not used in flame photometry.

i) total consumption ii) Laminar flow

iii) spirit iv) Lundergarph

Q2) Attempt any two of following. **[20]**

a) Describe construction and working of quinhydrone electrode. Explain its use in determination of pH of solution.

b) What is gravimetric analysis? Explain in detail the process of precipitation, filtration, drying, ignition and weighing.

c) What is column chromatography? Explain the types of column chromatography. Give four applications of ion exchange chromatography.

Q3) Attempt any three of following. **[12]**

a) Applications of Flame photometry in real sample analysis.

b) Applications of spectrophotometry

c) Deviation from Beer's law.

d) Interference in flame photometry

e) Optimum conditions for good precipitation.