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Sl.No.

Total No. of Pages : 2

V Semester III B.Sc. Examination, March/April - 2021

(Scheme :CBCS)

CHEMISTRY

Basic Analytical Chemistry (SEC)

Time : 2 Hours

Max. Marks : 40

Instruction: Write balanced chemical equations and neat diagrams wherever necessary.

PART - A

1. Answer all the questions. [4 × 1 = 4]
- a) Define significant figures.
 - b) Write the definition of pure water.
 - c) The adulterated coffee gives reddish colour when shaking with 2% Na OH solution. Name the adulterant.
 - d) If a solute travels with the solvent front to the same distance, what is the R_f value of that solute?

PART - B

Answer any four questions. [4 × 9 = 36]

2. a) Explain the role of analytical chemistry as interdisciplinary subject. [4]
b) Discuss the determinant errors. [3]
c) Differentiate between accuracy and precision. [2]
3. a) Write a note on composition of soil. [3]
b) Explain the principle of estimation of Ca^{2+} and Mg^{2+} by complexometric titration. [3]
c) Define acidity of water. How do you determine the acidity of water? [3]
4. a) Discuss the principle of determination of dissolved oxygen (DO) of a water sample. [3]
b) Write a note on water purification methods. [3]
c) Illustrate the analysis of colouring agent with an example. [3]

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5. a) Discuss the procedure to identify adulterants in chilly powder. [3]
b) Define chromatography. Explain the principle of chromatographic separation. [4]
c) What are the advantages of TLC. [2]
6. a) How do you separate Fe^{3+} and Al^{3+} mixture by paper chromatography. [3]
b) Define ion exchange capacity of a resin. Write the batch procedure for the determination of ion exchange capacity. [3]
c) What is [3]
i) Stationary phase
ii) Mobile phase
iii) Column chromatography.



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