

C.U.SHAH UNIVERSITY

Summer Examination-2016

Subject Name: Instrumental Methods of Analysis-II

Subject Code: 4SC04IMA1

Branch: B.Sc.(Micro,Biotech)

Semester: 4

Date: 10/05/2016

Time: 02:30 To 05:30

Marks: 70

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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Q-1 Attempt the following questions: (14)

- a) Define the term – anion and cation.
- b) Define linear velocity.
- c) What is capacity factor, k' in column chromatography?
- d) Name the mobile phase used in HPLC?
- e) Define the term: retention time in Gas chromatography.
- f) Name various gases used in gas chromatography.
- g) How much optimum voltage is needed for electrophoresis?
- h) Write the equation for K_d in partition chromatography.
- i) Name any three major components of electrophoresis apparatus.
- j) What is the role of separating gel in electrophoresis?
- k) Write full form of SDS-PAGE.
- l) What is the role of ladder in thin layer chromatography?
- m) Mention the Use of auto injectors in HPLC.
- n) What do you mean by adsorption equilibrium?

Attempt any four questions from Q-2 to Q-8

Q-2 Discuss in detail about definition, principle, instrumentation and parts of gas chromatographs with diagram. (14)

Q-3 Discuss principle, classification and basic components of column chromatography. (14)

Q-4 Attempt all questions (14)

- a) Write a note on column preparation for column chromatography. (7)
- b) Discuss the principle and instrumentation for HPLC. (7)



