EASTERN UNIVERSITY, SRI LANKA

SECOND EXAMINATION IN SCIENCE 2016/2017-2019

FIRST SEMESTER

CH 202: ANALYTICAL CHEMISTRY

(Repeat)

Answers all questions   **Time: One hour**

1.

(a) Discuss the basic principles involved in colorimetric method

(35 Marks)

(b) Describe a method to determine the concentration of Fe^{3+} ions in an unknown solution using colorimetry.

(30 Marks)

(c) A 0.01 M solution of permanganate solution transmits 60 % of the incident radiation. If the path length is 1 cm, calculate the following:

(i) Absorption

(ii) The molar extinction coefficient

(iii) Percentage of transmittance for 0.005 M permanganate solution.

(35 Marks)

(P.T.O)

2.

(a) Briefly describe the paper chromatography based on the following aspects.

(i) the development of paper chromatogram.

(ii) how the separated compounds in paper chromatogram can be identified and analysed.

(40 Marks)

(b) Describe the 'Ion Exchange Chromatography'. Briefly discuss the factors determining the distribution of ions in 'Ion Exchange Chromatography'

(20 Marks)

(c) Briefly explain the Gas Chromatography by using a labelled diagram and write the function/s of each basic component of this Chromatography.

(40 Marks)

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