

The Assam Royal Global University, Guwahati

Royal School of Biosciences

M.Sc Biochemistry 1st Sem

Semester End Examination, December 2018

Course Title: BIOANALYTICAL TECHNIQUES

Course Code: BCH154D101

Time: 3 Hours

Maximum Marks: 70

Note: Attempt all questions as per instructions given.

The figures in the right-hand margin indicate marks.

Section – A

- 1. Attempt all questions. (Maximum word limit 50)** 2x8
- Why solubilizers are used in electrophoresis.
 - What is principle of UV-spectroscopy.
 - Write the principle for TLC.
 - Name three detectors used in gas chromatography.
 - Write is centrifugation, what are it types
 - Do pH is essential in centrifugation technique, explain in short.
 - What is phase contrast microscopy.
 - How light microscopy is different from fluorescence microscopy.

Section – B

- 2. Answer any one:** 12x1
- Discuss in details agarose gel electrophoresis.
 - Explain the Laws of photometry. Beer-Lambert's law and principles and applications of colorimetry
- 3. Answer any one:** 14x1
- Define chromatography. Discuss gel permeation chromatography.
 - What is HPLC? Explain in details.
- 4. Answer any two of the following Questions:** 7x2
- Explain differential and density gradient centrifugation.
 - How sub-cellular fractionization can be done, explain with an example.
 - What is centrifugation , explain its precaution measure to use.
- 5. Answer any two of the following Questions:** 7x2
- Explain principle and working of light microscopy.
 - Discuss in detail transmission electron microscopy.
 - What do you understand by confocal microscopy