

The Assam Royal Global University, Guwahati

Royal School of Biosciences

M.Sc Biotechnology 1st Sem

Semester End Examination, December 2018

Course Title : Biochemistry

Course Code : BTC154C102

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**
- Define bases and pKa.
 - Write two properties of water.
 - What are glycoproteins?
 - Name all the lipoproteins.
 - Define nucleosides and nucleotides with suitable example
 - What are nucleoproteins.
 - Define pyranose and furanose ring structures with example
 - Write the role of niacin in glycolysis.

Section – B

- 2. Answer any one:** **12**
- Explain globular and fibrous proteins. Discuss the secondary structure of proteins.
 - Discuss the physical and chemical properties of amino acids. What is the function of amino acid.
- 3. Answer any two:** **7x2**
- What are triacyl glycerol. Explain the properties of triacylglycerol.
 - Discuss the fluid mosaic model.
 - Discuss the classification of carbohydrate in detail.
- 4. Answer any two of the following Questions:** **7x2**
- Explain the helical structure of DNA along with its various forms.
 - What you understand by purines and pyrimidines, explain with structures.
 - What do you understand by Michalis -Menten Equation.
- 5. Answer any two:** **7x2**
- Discuss vitamins
 - Explain phosphogluconate pathway
 - Discuss TCA cycle along with its regulation.