

The Assam Royal Global University, Guwahati  
Royal School of Bioscience  
M.Sc. in Biochemistry 1<sup>st</sup> Semester  
Semester End Examination, December 2018  
Course Title: Cell Biology and Physiology  
Course Code: BCH154C102

Time: 3 Hours

Maximum Marks: 70

Note: Attempt all questions as per instructions given.

*The figures in the right-hand margin indicate marks.*

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Section – A

- Q.1. Attempt all questions. (Maximum word limit 50) 2 x 8**
- a. What is the cell theory?
  - b. Explain the Microtubules and microfilament.
  - c. Define Cell differentiation.
  - d. Define Carcinogenesis.
  - e. Define vital capacity.
  - f. Define thrombosis.
  - g. Define exocrine
  - h. Write the short notes on estrogen

Section – B

- Q.2. Answer any two of the following questions 7x2**
- a. Explain the function and structure of the Golgi complex.
  - b. Explain the function and structure of the Endoplasmic reticulum
  - c. Describe the prokaryotic cell and eukaryotic cell.
- Q.3. Answer any two of the following questions 7x2**
- a. Describe general organization of viruses.
  - b. Describe the structure and function of mitosis and meiosis.
  - c. Explain the role of cytochrome P-450 in xenobiotic metabolism
- Q.4. Answer any two of the following questions 7x2**
- a. Name the components of the formed elements in the blood and mention one major function of each of them
  - b. Define hemophilia. Write the types of hemophilia with explanations.
  - c. Define function of Blood coagulation.
- Q.5. Explain any three of the following 4X3**
- a. State the role of pancreatic juice in digestion of proteins
  - b. Define Inspiratory capacity and Expiratory capacity
  - c. Explain brief account of the Henle's loop plays an important role in concentrating the urine
  - d. Describe the role of liver, lungs and skin in excretion
  - e. Briefly the function of Pituitary and thyroid gland
  - f. Define Glomerular Filtration Rate (GFR)