

The Assam Royal Global University, Guwahati

Royal School of Life Sciences

B.Sc Zoology, 4th Semester

Semester End Examination, July 2021

Course Title : Immunology & Histology

Course Code : ZOO142C 401

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) 2 x 8
- a. Define tissue. Name the different types of animal tissues.
 - b. What are the functions of a nerve tissue?
 - c. What is a dye? What are its properties of dye used in tissue staining?
 - d. What do you mean by the term Metachromasia?
 - e. Define lymph. What is the function of lymph?
 - f. What is spleen? What role does spleen play in the human body?
 - g. What do you mean by cell mediated immunity?
 - h. What is RIA?
2. Attempt **any one** of the following: 12 x 1
- a. Supported with a suitable diagram, classify epithelial tissues, and describe the function of each type of epithelial cells.
 - b. Write a brief note on the structure and function of the different connective tissues.
3. Attempt **any two** of the following: 7 x 2
- a. Explain the different layers of the gastro-intestinal (GI) tract with the help of a suitable diagram.
 - b. Write in details the sequential steps in preparation and staining of tissue during microtomy.
 - c. Write an account on the histological organization of kidney tissues.

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Section – B

4. Attempt **any two** of the following: 7 x 2
- a. Explain how the immune system provides the first line of defense against an infection.
 - b. Differentiate between natural and artificial immunity.
 - c. What is lymphoid system? Describe the different lymphoid organs.
5. Attempt **any two** of the following: 7 x 2
- a. Define immunoassay. Write briefly about any two Immunoassay techniques.
 - b. Describe Hybridoma Technology in detail.
 - c. Describe the general structure of an antibody. Support your answer with suitable diagram.