

U.G. 4th Semester Examination - 2021**ZOOLOGY****Course Code : BZOCCCHC 403****Course Title : Immunology**

Full Marks : 30

Time : 2 Hours

*The figures in the right-hand margin indicate marks.**Candidates are required to give their answers in their own words as far as practicable.*

1. Answer any **ten** questions from the following :
1×10=10
 - a) What is TLR?
 - b) What is paratope?
 - c) State the function of chemokines.
 - d) Define Herd Immunity.
 - e) What is attenuated vaccine?
 - f) Give example of two secondary lymphoid organs.
 - g) Give example of Type-I hypersensitivity.
 - h) State the principle of Mantoux tuberculin skin test.

- i) What is the function of NK cell?
 - j) Why adjuvants are added to vaccines?
 - k) State the result of treatment of a IgG molecule with mercaptoethanol.
 - l) What is the function of hinge region of antibody?
 - m) Expand HLA.
 - n) What is macrophage.
 - o) What do you mean by ADCC?
2. Answer any **five** questions from the following
2×5=10
 - a) Explain class switching.
 - b) State the four cardinal sign of inflammation.
 - c) Write down two basic differences between MHC I and MHC II.
 - d) What are the basic differences between active and passive immunity?
 - e) How NK cells play role in innate immunity?
 - f) What is cytokine pleiotropy? Give example.
 - g) What is opsonization?
 - h) What is the significance of sandwich ELISA?

3. Answer any **two** questions from the following:

5×2=10

- a) Briefly describe the classical pathway of complement system.
 - b) Explain the response of immune system to dengue virus. Write the names and principle of the serological tests used for the diagnosis of dengue infection.
 - c) How immature T-cells become single positive T-cells in Thymus? What are ITAMS?
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