

B.Sc. 6th Semester (General) Examinations, 2020 (CBCS)

Subject: Zoology

Paper-DSE-2: (Immunology)

Full Marks: 40

Time: 2 Hrs

Candidates are required to give their answer in the own words as far as practicable

*Answer any **eight** questions of the following*

8×5=40

1. Give an outline labelled diagram to show the collaboration between humoral and cell-mediated branches of the immune system.
2. Specify basic properties of Antigen.
3. Draw the basic structure to depict various domains of an immunoglobulin G (IgG) molecule with appropriate labelling.
4. Write the principle of ELISA.
5. Tabulate the differences between the peptide binding of major histocompatibility complex class I and II.
6. Write down the general properties and functions of cytokine.
7. Discuss classical pathway of complement activation.
8. Severe immunological problems arise if an Rh-negative mother, who during her first pregnancy gave birth of an Rh-positive child, conceives an Rh-positive fetus in her subsequent pregnancy. Explain.
9. IgM is the first immunoglobulin class produced in a primary immune response against an antigen though the affinity of IgM is lesser than IgG isotype – explain.
10. Compare and contrast between primary and secondary immunodeficiencies.

Paper-DSE-2: (Insect, Vectors and Diseases)

Full Marks: 40

Time: 2Hrs

Candidates are required to give their answer in the own words as far as practicable

*Answer any **eight** questions of the following*

8×5=40

1. Write the scientific name of any two mosquito vectors and their role in disease transmission.
2. Briefly describe the pathogenesis and control of malaria.
3. Briefly explain the diagnosis and treatment of chikungunya.
4. Describe any two types of mouthparts in insects with suitable diagram.
5. Differentiate between mechanical and biological vector with example and their role in disease transmission.
6. Write four characteristic features of both Diptera and Siphonaptera with example.
7. Write a short note on epidemic and endemic Typhus.
8. Briefly illustrate the control strategies of bed bug population?
9. Illustrate the biological control methods of mosquito population in your locality.
10. Write a short note on Chagas disease.