

2022

ZOOLOGY (Honours)

Paper Code : ZOOL-H-DC-13

[Parasitology and Immunology]

(CBCS)

Full Marks: 25

Time: Two hours

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

1. Answer *eight* questions taking *four* from *each* group:

$\frac{1}{2} \times 8 = 4$

(Group A: Parasitology)

- a) Give an example of digenetic parasite.
- b) Tsetse fly are the vectors of Chagas disease. (True/ False)
- c) Scrub typhus fever is caused by bacteria *Orientia tsutsugamushi*. (True/False)
- d) Name a vector species of flea transmitting *Yersinia pestis*.
- e) Give an example of haemoflagellate parasite.
- f) Which ectoparasite can spread diseases like Lyme disease and Rocky Mountain spotted fever?

(Group B: Immunology)

- g) The only immunoglobulin that crosses placenta is _____. (Fill in the blank)
- h) Treatment of snake's bite by providing anti-venom is an example of artificial active immunity. (True/ False)
- i) The type of hypersensitivity mediated by T-helper cell is _____. (Fill in the blank)
- j) Name the B-cell maturation site in birds.
- k) Name the first antibody produced in response to infections.
- l) All immunogens are antigens, not all antigens are immunogens. (True/ False)

(2)

2. Answer *two* questions taking *one* from *each* group: 2½ × 2= 5

(Group A: Parasitology)

- a) What is hyperparasitism? Give an example.
- b) Write the pathogenicity of *Taenia saginata*.

(Group B: Immunology)

- c) Differentiate between MHC-I and MHC-II molecule.
- d) Describe the structure of an antibody with a labelled diagram.

3. Answer *four* questions taking *two* from *each* group: 4 × 4= 16

(Group A: Parasitology)

- a) Write the major differences between soft tick and hard tick. 4
- b) Write the methods of laboratory diagnosis and treatment of leishmaniasis. 2+2
- c) Describe briefly the life cycle of *Schistosoma haematobium*. Write the methods of prevention of schistosomiasis infection in humans. 3+1
- d) What do you mean by biological and mechanical vector? Add a note on control of bed bugs. 2+2

(Group B: Immunology)

- e) Briefly describe sandwich ELISA. State its application. 3+1
 - f) What is affinity? Briefly describe the process of inflammation. 1+3
 - g) Explain the endogenous pathway of antigen processing and presentation. 4
 - h) Define adjuvant. Discuss in brief the factors influencing immunogenicity. 2+2
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