QP Code: 24/PT/14/VIIIA

POST-GRADUATE DEGREE PROGRAMME

Term End Examination — December, 2024

ZOOLOGY

Paper-8A : PARASITOLOGY AND PUBLIC HEALTH

Time : 2 hours] [Full Marks : 50

Weightage of Marks : 80%

Special credit will be given for accuracy and relevance in the answer. Marks will be deducted for incorrect spelling, untidy work and illegible handwriting. The weightage for each question has been indicated in the margin.

1. Answer *two* questions : $9 \times 2 = 18$

   a) Define antigenic variation. Describe the molecular basis of antigenic variation found in African trypanosomiasis and mention its significance. 2 + (5 + 2)

   b) What is PAM ? Name the causative organism of PAM and describe the life cycle-stages and pathogenicity caused by this organism. 2 + (1 + 4 + 2)

   c) Describe the ELISA technique. Mention different types of ELISA. Add a note on the utility of ELISA in clinical parasitology. 3 + 3 + 3

   d) Distinguish between obligatory and facultative myiasis. Classify myiasis on the basis of the site affected. 2 + 7

2. Answer *three* questions : $6 \times 3 = 18$

   a) State the causative organism, symptoms and control measures of the following diseases.

   (i) Surra disease (ii) Anthrax (iii) Fowl cholera 2 + 2 + 2

   b) Describe the structure of *B*-cell and *T*-cell with suitable diagrams and mention their functions. 4 + 2

c) Draw and describe the trophozoite and cystic stages of *Entamoeba histolytica*. 3 + 3

d) Describe the morphology and life-cycle of flea. State briefly three flea-borne diseases. 3 + 3

e) State three major categories of epidemiology. Write a short note on the epidemiology of Malaria. 3 + 3

f) Describe the principle and the technique of counter-current immunoelectrophoresis. Mention its importance in clinical parasitology. 4 + 2

3. Answer *two* questions : $4 \times 2 = 8$

a) Describe the structure and function of NK cells. 2 + 2

b) Describe the structure of IgG and state its functions. 2 + 2

c) What is agglutination ? Describe the process of agglutination and mention its importance in clinical parasitology. 2 + 2

d) What is bird-flue ? State the causative organism, symptoms and control measures of bird-flue. 1 + 1 + 1 + 1

4. Answer *two* questions : $3 \times 2 = 6$

a) Describe the histological structure of thymus gland with suitable diagram. 2 + 1

b) Define propagative, cyclopropagative and cyclical vectors with examples. 1 + 1 + 1

c) Distinguish between adult Anopheles and Culex mosquitoes. 3

d) Compare between Anthropozoonosis and Zooanthroponosis with suitable examples. 3