

M.Sc. Examination, 2017

Semester-IV

Zoology

Paper-MZET-401

(Parasitology-I)

Time: 4 hours

Full Marks: 80

Questions are of value as indicated in the margin

Answer *any eight* questions

1. Define parasitism. Discuss in brief the pathology derived from parasitism. 2+8=10
2. What do you understand by 'Microecology' and 'Macroecology' in the context of parasitism. Discuss in detail the factors that influence parasite density and distribution in both macro and micro environment. 2+4+4=10
3. Give an account on the invertebrate internal defense mechanism during its interaction with a parasite. What is parasitic mimicry? How does a parasite mimics its host. 5+1+4=10
4. Describe the structure and formation of egg shell in nematodes. What are the different methods in egg laying? Explain the general environmental effects on nematode egg hatching. 3+2+5=10
5. Describe the energy metabolism in anaerobic protozoan parasite. 10
6. What is systemic acquired resistance? How does it differ from immune response in animal? Discuss the role of SA as an inducer of plant defense response. 2+2+6=10
7. What is citrus decline? Describe in brief the life cycle and pathogenicity of *Tylenchus semepenetrans*. 2+8=10
8. Explain the following: 5+5=10
 - a. Role of NO as a signaling molecule in plants.
 - b. ROS mediated defense response in plants.
9. What is transfer cell? How does root-knot nematodes induce formation of transfer cell in the host? Comment on the host generated defense response against root-knot nematode. 2+6+2=10
10. Give a brief account on the epidemiology and control measures in visceral leishmaniasis. 10