

ELECTIVE- ENTOMOLOGY

Fourth Semester M.Sc. Degree Examination (CSS) –Zoology

ZY 4A ET 01 Course 1-MORPHOLOGY AND TAXONOMY

Time: 3 hours

Total Weight: 30

Section A-Short answer type questions

Weight-1

Answer any 10 out of 12

1. What is tentorium?
2. Comment on opisthognathus.
3. Give the names of any four gall pests.
4. What is paedogenesis?
5. Give a brief note on stridulatory organs.
6. What is nephrorectal complex?
7. What is halter, Name an insect with a halter.
8. Give the salient features of Diptera.
9. What are campaniform organs?
10. Mention the salient features of phasmida.
11. Write notes on johnston's organ.
12. Comment on wing coupling apparatus.

Section B- Short essay type questions

Weight-2

Answer any 5 out of 8

13. What is filter chamber? Comment on its functions.
14. Discuss on the taxonomic position of earwig.
15. Differentiate between exopterygota and endopterygota with suitable examples.
16. Write the salient features of siphnoptera.
17. Distinguish between fossil and living fossil. Give examples.
18. Describe the different types of tracheae. Mention their functions.
19. Explain the different types of ovarioles in insects.
20. What are the economic importances of gall forming insects?

Section C-Long essay type questions

Weight-5

Answer any 2 out of 3

21. Describe the social organisation of honey bee.
22. Write an essay on wing venation in insects. Add notes on wing modifications.
23. Explain the functional morphology of the mouth parts in insects.

Fourth Semester M.Sc. Degree Examination (CSS) -Zoology

ZY 4A ET 02 Course II-ANATOMY AND PHYSIOLOGY

Time: 3 hours

Total Weight: 30

Section A-Short answer type questions

Weight-1

Answer any 10 out of 12

1. What is Cuticulin?
2. Comment on Ring gland.
3. Mention the biological significance of trehalose?
4. What are Kairomones?
5. What is neurohaemal organ? Give an example.
6. What are urate cells? What is its function?
7. Comment on Peritrophic membrane.
8. What is Bursicon?
9. Name the haemocytes of insects.
10. Comment on neuropile.
11. What are blood gills?
12. What is holopneustic tracheal system?

Section B-Short essay type questions

Weight -2

Answer any 5 out of 8

13. Comment on cuticular modifications in insects.
14. Describe the histology of malpighian tubules.
15. Discuss the significance of tracheal ventilation in insects.
16. Give an account on digestion and absorption of proteins in insects.
17. Describe briefly the physiology of impulse transmission.
18. Give an account on the composition of haemolymph.
19. Write notes on respiratory pigments in insects.
20. Briefly describe the structure of insect brain with diagrams.

Section C- Long essay type questions

Weight-5

Answer any 2 out of 3

21. Explain the role of pheromones in socio – chemical communication in insects.
22. Describe the mechanisms of intermediary metabolism.
23. Discuss the anatomy and physiology of mechanoreceptors in insects.

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ZY 4A ET 03 Course III- APPLIED ENTOMOLOGY

Time: 3 hours

Total Weight: 30

Section A-Short answer type questions

Weight-1

Answer any 10 out of 12

1. What are antifeedants? Give an example.
2. What is Scabies?
3. Define potential pest and key pest.
4. Comment on “dead heart”?
5. Name any four pests of paddy.
6. What is autocidal method of insect control?
7. Write notes on ecological backlash.
8. Name the pests of Mango.
9. Distinguish between parasites and parasitoides.
10. Write notes on pebrine disease
11. Mention the advantages of IPM.
12. What is insecticide synergist?

Section B-Short essay type questions

Weight-2

Answer any 5 out of 8

13. Explain the causes of pest outbreak.
14. Describe the nature of damage and control measures of a major pest of sugarcane.
15. Distinguish between haematophagy and phytophagy.
16. Describe the biology and control measures of *Sitophilus oryzae*.
17. Explain the process of inoculation of lac insect.
18. Describe the nature of attack and control measures of any two pests of domestic animals.
19. Give an account of the biology and control measures of locust.
20. Comment on DNA techniques in forensic entomology

Section C-Long essay type questions

Weight-5

Answer any 2 out of 3

21. Describe the biology, nature of damage and control of any two pests of coconut.
22. Describe the chemistry and mode of action of any four insecticides.
23. Explain the mode of transmission and epidemiology any four vector borne diseases.

