

KERALA AGRICULTURAL UNIVERSITY
B.Sc. (Hons.) Agriculture – 2009 Admission
1st Semester Final Examination - March 2010

Cat. No. : Ento 1101
Title : Insect Morphology, Physiology
and Systematics (2+1)

Max. marks: 80

Time : 3 hours

I. Fill up the blanks / Define

10x1=10

a. Fill up the blanks

1. _____ is the major nitrogenous waste product in insects.
2. The hormone responsible for moulting _____.
3. Stalked eggs are present in _____.
4. Prolegs are absent in _____.
5. Trichogrammatids are _____ parasitoids.

b. Define the following

1. Peritrophic membrane
2. Ommatidium
3. Parthenogenesis
4. Crawlers
5. Chrysalis

II. Write short notes on ANY TEN of the following

10x3=30

1. Tympanal organ
2. Proteins of cuticle
3. Classification of neurons based on function
4. Types of insect head
5. Air sacs
6. Physogastry
7. Prolegs
8. Characters of class Insecta

9. Difference between looper and semilooper

10. Holometabola

11. Taxonomic characters of lacewing bugs

12. Filter chamber

III. Write short essays on ANY SIX of the following

6x5=30

1. Explain the factors responsible for the dominance of insects on the earth
2. Distinguish between Heteroptera and Homoptera
3. Write the common names of the following families with examples
 - i. Tingidae
 - ii. Miridae
 - iii. Aleyrodidae
 - iv. Coccidae
 - v. Pseudococcidae
 - vi. Aphididae
4. Write the order characters of Neuroptera
5. Explain the moulting process in insects
6. Explain the structure and functions of insect antenna
7. Explain the physiology of excretion in insects
8. Write the classification of respiratory system based on the nature and function of spiracles

IV. Write essays on ANY ONE of the following

1x10=10

1. Explain the structure of insect wing and the different types of wings in insects
2. Explain the different families of moths and butterflies with examples in the order Lepidoptera