



Ento.1101

KERALA AGRICULTURAL UNIVERSITY  
B.Sc. (Hons.) Ag.  
2015 & Previous Admission  
I Semester Re-examination-March-2018  
Insect Morphology, Physiology & Systematics (2+1)

Marks: 50  
Time: 2 hours  
(10x1=10)

**I Fill in the blanks**

- 1 The egg mass of cockroach is called-----
- 2 -----is the major nitrogenous waste in terrestrial insects
- 3 The modified hind wing of a dipteran fly is named as -----

**Match the following**

- |                      |                     |
|----------------------|---------------------|
| 4 Scaly wings        | a Rhinoceros beetle |
| 5 Maggot             | b Butterfly         |
| 6 Lamellate antennae | c Coleoptera        |

**State True or False**

- 7 The Juvenile hormone inhibits metamorphosis
- 8 Alpha taxonomy is concerned with evolutionary relations and phylogeny
- 9 Spine is a cuticular appendage

**Define the Following**

- 10 Paedogenesis

**II Write Short notes on ANY FIVE of the following**

(5x2=10)

- 1 Characteristics of Ologopod larva
- 2 Key characters of Tachinidae
- 3 Differentiate Oviparous and viviparous insects
- 4 Parthenogenesis
- 5 Draw a sketch of insect circulatory system
- 6 Describe different types of insect head
- 7 Binomial nomenclature

**III Answer ANY FIVE of the following**

(5x4=20)

- 1 Give a short account of collection and preservation of insects
- 2 Give an account of malpighian tubules and its function
- 3 Endocrine glands in insects
- 4 Define metamorphosis with reference to different types
- 5 Elaborate the functions of haemolymph
- 6 Types of reproduction in insects
- 7 Describe insect integument and its function

**IV Write an essay on ANY ONE of the following**

(1x10=10)

- 1 Give an account of the different types of mouth parts of insects with appropriate diagrams.
- 2 Give an account of sense organs in insects

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