

PARUL UNIVERSITY
COLLEGE OF AGRICULTURE

B.Sc.(Hons.) Agriculture Winter 2018 - 19 Examination

Semester: 3

Date: 25/10/2018

Subject Code: 20104201

Time: 10.30 am to 1.00 pm

Subject Name: Insect Morphology and Systematics

Total Marks: 60

Instructions

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

Q.1 Do as Directed.**A. Fill in the blanks. (Each of 1.00 marks)****(10)**

1. A respiratory system in which all ten pairs of spiracles are functional is called _____
2. The right mandible is absent in _____ type of mouth parts
3. The male genital appendages are situated at _____ abdominal segment in insect
4. The antennae is situated at _____
5. The forewing of coleopteran insects modified in to _____ for protection of membranous hind wings.
6. Adult mite have _____ pairs of legs
7. The wings of insects arises from _____
8. The amount of uric acid in excreta of insects is _____ percent
9. In house fly, hind wings are reduced to slender knob and a stalk structure known as _____
10. Aquatic nymph is called _____

B. Multiple choice type questions. (Each of 1.00 mark)**(10)**

1. Who was the first Entomologist to the Government of India?

a) H. M. Lefroy	c) T. B. Fletcher
b) Lionel de Niceville	d) J. C. Fabricius
- 2 Who was first Imperial Entomologist?

a) Beeson	c) Hampson
b) Maxwell Lefroy	d) Fletcher
- 3 Which insect is biggest in insect world in term of total wing surface area?

a) Atlas moth (Attacus atlas)	c) Sphinx moth
b) Tasar silkworm moth	d) Lemon butterfly
- 4 Which is fastest flying insect?

a) Dragonfly	c) Locust
b) Butterfly	d) mayfly
- 5 It is the largest order in the animal kingdom.

a) Dipteral	c) Hymenoptera
b) Coleopteran	d) Lepidoptera
- 6 All arthropods have: _____

a) Segmented bodies	c) Jointed appendages
b) Bilateral symmetry	d) All of these
- 7 Insects of which order possess scale wings?

a) Lepidoptera	c) Diptera
b) Coleoptera	d) Orthoptera
- 8 Hermaphroditism is very common in _____

a) Icerya purchasi	c) Aphis gossypii
b) Apisindica	d) Myzus persicae

9 The part of insect body is _____

- a) Head, thorax and abdomen
- b) Head and tail
- c) Head, cephalothorax
- d) None of these

10 The outer most layer of insect body is called _____

- a) Cuticle
- b) Epidermis or Hypodermis
- c) Epidermis
- d) Basement membrane

Q.2 Do as Directed.

A. Define the following. (Any five)

(05)

1. Agricultural Entomology
2. Exoskeleton
3. Moulting
4. Metamorphosis
5. Respiratory System
6. Nocturnal
7. Nomenclature

B. Answer the following. (Any Five)

(05)

1. Write the Steps of moulting
2. Explain the body wall its structure and function with labelled diagram
3. Explain the types of metamorphosis with example
4. Draw the labelled diagram of Female reproductive system
5. What is insect?
6. What is entomology?
7. How insects are harmful (Enemy)?

Q.3 Write short notes. (Any five)

(15)

1. Draw the labelled diagram of tracheal respiration system
2. Write the function of blood or haemolymph of insect
3. Write the types of neurons according to functions
4. Write the types of neurons according to number of axons
5. Write the stages of taxonomy
6. Enlist the excretory organs

Q.4 Attempt any Three/Long Questions/Example

(15)

1. Explain the digestive system of insect with labelled diagram
2. Enlist the excretory organ of insect and explain the Malpighian tubules
3. What is metamorphosis? Explain the types of metamorphosis with example
4. Draw the labelled diagram of Female reproductive system