

**PARUL UNIVERSITY**  
**COLLEGE OF AGRICULTURE**  
**B.Sc.(Hons.)Agriculture Summer 2017 - 18 Examination**

Semester: 2

Date: 29/05/2018

Subject Code: 20104151

Time: 10:30 am - 01:00pm

Subject Name: Fundamentals of Entomology

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. The right mandible is absent in \_\_\_\_\_ type of mouth parts
2. The male genital appendages are situated at \_\_\_\_\_ abdominal segment in insect
3. The antennae is situated at \_\_\_\_\_
4. Every flowering plant providing food for one or many \_\_\_\_\_ insects.
5. Father of insect physiology is \_\_\_\_\_
6. The level of taxonomy concerned with the arrangement of species in the biological hierarchy is \_\_\_\_\_
7. The amount of uric acid in excreta of insects is \_\_\_\_\_ percent
8. In house fly, hind wings are reduced to slender knob and a stalk structure known as \_\_\_\_\_
9. Crop and gizzard is a part of \_\_\_\_\_
10. Fore gut is \_\_\_\_\_ in origin

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

1. During the development period insects cast off their cuticle is called
 

|                    |                  |
|--------------------|------------------|
| a) Shedding        | c) Casting       |
| b)Moulting/ecdysis | d) None of these |
2. The sclerites are attached to each other with a thin membrane is called
 

|             |          |
|-------------|----------|
| a)Sclerites | c)Groove |
| b)Suture    | d)Sulcus |
3. The second segment of antennae is
 

|           |                  |
|-----------|------------------|
| a) Scape  | c) Flagellum     |
| b)Pedicel | d) None of these |
4. Insect tongue is
 

|          |               |
|----------|---------------|
| a)Labium | c)Hypopharynx |
| b)Labrum | d)Maxilla     |
5. The basal segment of insect leg is
 

|               |          |
|---------------|----------|
| a)Coxa        | c) Femur |
| b) Trochanter | d) Tibia |
6. The wax layer is the part of
 

|               |                |
|---------------|----------------|
| a) Procuticle | c) Exocuticle  |
| b)Epicuticle  | d) Endocuticle |
7. Which is fastest flying insect?
 

|              |           |
|--------------|-----------|
| a)Dragonfly  | c) Locust |
| b) Butterfly | d) mayfly |
8. Afferent neuron is also knows as
 

|                         |                 |
|-------------------------|-----------------|
| a)Sensory neuron        | c) Motor neuron |
| b) Associational neuron | d) All of these |
9. Absorption of digested food takes place in
 

|            |                  |
|------------|------------------|
| a) Hindgut | c) Foregut       |
| b)Midgut   | d) None of these |

10. Which type of legs are found in mole cricket

- a) Fossorial
- b) Natatorial
- c) Saltatorial
- d) Cursorial

**Q.2 Do as Directed.**

**A. Define the following. (Any five)**

**(05)**

1. Haemocoel
2. Taenidia
3. Paedogenesis
4. Metamorphosis
5. Respiratory System
6. Moulting
7. Nomenclature

**B. Answer the following. (Any Five)**

**(05)**

1. Explain the types of insect mouthparts with example.
2. How temperature is responsible for insects growth and development?
3. How insects are beneficial?
4. Explain the types of metamorphosis with example.
5. Classify of respiratory system according to number of functional spiracles
6. Draw the body wall of insect with labelled diagram.
7. What is Entomology?

**Q.3 Write short notes. (Anyfive)**

**(15)**

1. Write the types of neurons according to functions.
2. Write the function of blood or haemolymph of insect.
3. Enlist the excretory organ of insect and explain the Malpighian tubules.
4. Enlist the the excretory organs in insects body.
5. Write the stages of taxonomy.
6. Write the types of neurons according to number of axons.

**Q.4 Attempt any three long questions.**

**(15)**

1. Enlist the IPM components /tools and explain any one.
2. Explain the digestive system of insect with labelled diagram.
3. Draw the labelled diagram of tracheal respiration system.
4. Enlist the Sclerites of Head with location.