

Advanced Entomology Fundamentals

Entomology · Answer Key · 15 Questions

1. What is the primary function of the insect's proventriculus within the digestive system?

- A) Absorption of nutrients
- B) Mechanical grinding of food**
- C) Excretion of nitrogenous waste
- D) Secretion of digestive enzymes

2. Which insect order is characterized by having forewings that are modified into hardened covers known as elytra?

- A) Hymenoptera
- B) Diptera
- C) Coleoptera**
- D) Lepidoptera

3. In the insect respiratory system, what is the specific term for the external openings that allow for gas exchange?

- A) Spiracles**
- B) Tracheoles
- C) Ostia
- D) Malpighian tubules

4. What substance serves as the primary nitrogenous waste product excreted by most terrestrial insects?

- A) Urea
- B) Ammonia
- C) Uric acid**
- D) Creatinine

5. What is the specific name for the developmental stage between molts in insects undergoing incomplete or complete metamorphosis?

- A) Pupa
- B) Instar**
- C) Imago
- D) Nymph

6. Which of the following insect hormones is responsible for maintaining juvenile characteristics and preventing premature metamorphosis?

- A) Ecdysone
- B) Prothoracicotropic hormone
- C) Juvenile hormone**
- D) Bursicon

7. In the context of insect vision, what are the individual light-sensing units that compose a compound eye called?

- A) Ocelli
- B) Ommatidia**
- C) Rhabdoms
- D) Crystalline cones

8. Which anatomical structure is responsible for the production of silk in the larvae of many Lepidoptera species?

- A) Salivary glands**
- B) Malpighian tubules
- C) Accessory glands
- D) Cryptonephridial system

9. What is the functional purpose of the insect's hemolymph in relation to internal transport?

- A) Oxygen transport via hemoglobin
- B) Transport of nutrients and hormones
- C) Maintenance of blood pressure for movement
- D) Both B and C**

10. Which taxonomic order includes insects that possess a 'hamulus' (hook) to join the forewing and hindwing during flight?

- A) Hymenoptera**
- B) Hemiptera
- C) Orthoptera
- D) Neuroptera

11. What is the process called when an insect sheds its exoskeleton to allow for growth?

- A) Ecdysis**
- B) Apolysis
- C) Metamorphosis
- D) Diapause

12. Which specialized sensory structures located on an insect's antennae or palps are primarily responsible for chemoreception?

A) Sensilla

B) Styli

C) Cerci

D) Tegulae

13. What is the name of the 'dorsal vessel' that acts as the heart in the insect circulatory system?

A) Aorta

B) Pericardial sinus

C) Dorsal aorta and heart

D) Ventrical sinus

14. Which group of insects is defined by their unique 'sucking-piercing' mouthparts modified into a rostrum or beak?

A) Coleoptera

B) Hemiptera

C) Odonata

D) Isoptera

15. What is the term for a state of physiological dormancy in insects, often triggered by unfavorable environmental conditions?

A) Estivation

B) Diapause

C) Hibernation

D) Quiescence