



Cypress Creek FFA Invitational Online Entomology Exam

1. An insect's cuticle is primarily made of _____, which has also been studied for its medicinal properties.
 - A. chitin
 - B. hemolymph
 - C. melanin
 - D. melatonin
2. Solitary bees build nests in what type of habitat?
 - A. in the soil
 - B. in hollow plant stems
 - C. in existing small tree holes or cavities
 - D. all of the above
3. Which part of the exoskeleton is formed by a single layer of epithelial cells?
 - A. procuticle
 - B. basement membrane
 - C. cuticulin layer
 - D. epidermis
4. Which of these occupies the largest volume in an unfertilized insect egg?
 - A. periplasm
 - B. yolk
 - C. embryo
 - D. nucleus
5. Which of the following insect groups has hemimetabolous development?
 - A. mayflies
 - B. house flies
 - C. ants
 - D. weevils
6. The insect abdomen contains:
 - A. the digestion tract
 - B. all of the above
 - C. the reproductive tract
 - D. organs for excretion

7. The Johnston's organ _____.
A. all of the above
B. Is used to detect changes between antennal segments
C. Senses physical environmental stimuli (vibrations, wind, gravity)
D. Separates the Class Insecta from the Class Entognatha
8. The pleural suture lies just posterior to the _____.
A. episternum
B. epimeron
C. trochantin
D. trochanter
9. Rigid, inflexible structures of the exoskeleton are called _____.
A. apodemes
B. sutures
C. sclerites
D. segments
10. Squash bugs belong to what insect order?
A. Coleoptera
B. Diptera
C. Lepidoptera
D. Hemiptera
11. Approximately _____ species of insects are used as food in many parts of the world.
A. 100
B. 500
C. 400
D. 200
12. To which body segment are the elytra attached?
A. first abdominal
B. metathorax
C. mesothorax
D. prothorax
13. The furca is best described as:
A. An internal brace for the legs.
B. A hinge for the neck.
C. A springing organ.
D. A fulcrum for the wings.
14. Collophore and furcula are morphological terms associated with which order of insects?
A. Odonata
B. Lepidoptera
C. Collembola
D. Ephemeroptera

15. Which of this information is not common on insect specimen labels?

- A. county
- B. collector's name
- C. state
- D. soil type

16. Firebrats and silverfish are common household pests in the order _____.

- A. Hemiptera
- B. Odonata
- C. Mecoptera
- D. Thysanura

17. The following are groups of eusocial insects:

- A. ants
- B. gall-forming aphids
- C. termites
- D. All of these are eusocial insects

18. Which structure would not be found on an insect's leg?

- A. tarsomere
- B. propodeum
- C. arolium
- D. coxa

19. The internal organ system of insects that is analogous to the liver in mammals (In insects, it serves to actively transport water and ions from the hemolymph) is the _____.

- A. malpighian tubules
- B. peritrophic membrane
- C. tritocerebrum
- D. prothoracic gland

20. What structure is found in Diptera, but NOT in Hymenoptera?

- A. cerci
- B. haltere
- C. stigma
- D. stinger

21. Some factors contributing to the success of insects are:

- A. high reproductive rate, the evolution of flight, size
- B. size, the evolution of flight, lack of wings
- C. size, a protective cuticle, an efficient nervous system, four pair of legs
- D. high reproductive rate, the evolution of flight, ability to live without a brain

22. The tracheal system of an insect is best described as

- _____.
- A. a network of hollow tubes
 - B. a chain of interconnecting cells
 - C. a radial pattern of filaments
 - D. a method of anaerobic respiration

23. What is the principle energy source for most insects?

- A. vitamins
- B. proteins
- C. cellulose
- D. carbohydrates

24. Which structure is NOT part of the head capsule of insects?

- A. pronotum
- B. tentorium
- C. antennae
- D. vertex

25. In what order of insects are the front and hind wings held together by hamuli?

- A. Hymenoptera
- B. Hemiptera
- C. Diptera
- D. Lepidoptera

26. What do the orders Mantodea and Blattodea have in common?

- A. blood suckers
- B. sucking mouthparts
- C. hind wings are modified into halteres
- D. eggs are produced inside a pouch or ootheca

27. Chemicals released from plants to attract parasitic or predaceous insects that combat herbivorous insects are called _____.

- A. steroids
- B. tannins
- C. kairomones
- D. pheromones

28. The butterfly pupa is known as a _____.

- A. cocoon
- B. chrysalis
- C. naiad
- D. caterpillar

29. The father of modern taxonomy who created the binomial system of nomenclature was _____.

- A. May Berenbaum
- B. Thomas Say
- C. Carl Linnaeus
- D. Charles Darwin

30. The _____ are structures of the insect head that are responsible for grinding solid food.

- A. maxilla
- B. mandibles
- C. calyx
- D. labrum