



## 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