

Tarleton State University 2022 Invitational CDE Entomology Exam

1. The eastern population of monarch butterflies overwinter in _____.
 - A. Texas
 - B. Florida
 - C. Central Mexico
 - D. Baja California
2. _____ secrete a bubbly liquid-covering on plants to conceal themselves or their eggs.
 - A. Spittle bugs
 - B. Wax moths
 - C. Aphids
 - D. Scale insects
3. A _____ is the immature, aquatic stage of a dobsonfly.
 - A. Hellgrammite
 - B. Grub
 - C. Hellbender
 - D. Ant lion
4. What percentage of flowering plants on Earth require insect pollination?
 - A. 30%
 - B. 75%
 - C. 95%
 - D. 50%
5. In what order of insects are the front wings known as "elytra?"
 - A. Orthoptera
 - B. Hymenoptera
 - C. Hemiptera
 - D. Coleoptera
6. The plague, or "black death," is a disease of rodents and is transmitted by the _____.
 - A. Human body louse
 - B. Asian lady beetle
 - C. Oriental rat flea
 - D. Western tarnished plant bug
7. A mass of neural tissue that contains mostly nerve cell bodies and interneurons in an insect is called a _____.
 - A. Nerve
 - B. Motor neuron
 - C. Synapse
 - D. Ganglion
8. _____ is found as both a supporting element in fungal cell walls and a key component of arthropod exoskeletons.
 - A. Chitin
 - B. Collophore
 - C. Epicuticle
 - D. Epidermis
9. The absolute minimum information that must be associated with insect specimens after collection include _____.
 - A. Trap type and collector
 - B. Location and date
 - C. Date and collector
 - D. Location and trap type
10. Approximately how many species of insects have been described to date?
 - A. 1 million
 - B. 5 million
 - C. 12 million
 - D. 500 thousand
11. If an insect is described as zoophilic, that insect prefers _____ to _____.
 - A. Humans; animals
 - B. Animals; plants
 - C. Animals; humans
 - D. Plants; animals
12. The Hymenoptera from the list below that are not social are _____.
 - A. Hornets
 - B. Leafcutter bees
 - C. Honey bees
 - D. Sweat bees
13. As juvenile hormone levels fall in the hemolymph, what reaction is triggered in insects?
 - A. The corpora allata start to release more 23-hydroxy ecdysone
 - B. Immature forms start to change towards adulthood
 - C. Immatures remain immature
 - D. None of the above
14. Which structure is not part of an insect's tracheal system?
 - A. Tracheole
 - B. Spiracle
 - C. Taenidia
 - D. Sinus

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15. _____ is a family in the order _____.
A. Tortricidae, Hemiptera
B. Chrysomelidae, Coleoptera
C. Coleoptera, Chrysomelidae
D. Chrysomelidae, Collembola
16. A caterpillar of the cabbage butterfly is a common pest of _____.
A. Vegetables
B. Shrubs
C. Turfgrass
D. Flowers
17. Digging legs of mole crickets are what functional type?
A. Cursorial
B. Raptorial
C. Fossorial
D. Saltatorial
18. Which structure is not part of an insect's antenna?
A. Pedicel
B. Scape
C. Flagellum
D. Coxa
19. After its second molt an insect is a ____ instar.
A. First
B. Second
C. Third
D. Final
20. Malaria was eradicated in the U.S. in the mid-20th century in part because of the widespread use of _____.
A. Sevin
B. DDT
C. Malathion
D. Deet
21. The blood of insects is called _____.
A. Hemolymph
B. Hemocyanin
C. Hemoglobin
D. Sebum
22. What is the mouthpart called for feeding within the Lepidoptera?
A. Pronotum
B. Paranota
C. Pylorus
D. Proboscis
23. A geniculate insect antenna is _____.
A. Serrated
B. Hairy
C. Clubbed
D. Elbowed
24. Predaceous diving beetles belong to what insect order?
A. Dermaptera
B. Coleoptera
C. Diptera
D. Siphonaptera
25. The old shed skin left behind after an insect molts is known as the _____.
A. Sclerite
B. Stadium
C. Excuvium
D. Ecdysis
26. The _____ civilization regarding dung beetles as sacred.
A. Egyptian
B. Roman
C. Syrian
D. Aztec
27. To what family do hard ticks belong to?
A. Ixodidae
B. Simuliidae
C. Heptageniidae
D. Argasidae
28. Which of the following is the common name of the order Mecoptera?
A. Firefly
B. Dragonfly
C. Scorpionfly
D. Caddisfly
29. What function do protein cross-linkages have in the insect exoskeleton?
A. They lighten the color of the exoskeleton
B. They make it impermeable to water
C. They make membranes more flexible
D. They make sclerites more rigid
30. Which of these is not a longitudinal wing vein?
A. Cubitus
B. Furca
C. Radius
D. Costa