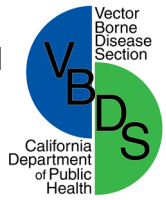


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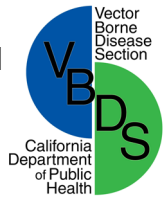


**CATEGORY B – THE BIOLOGY AND CONTROL OF MOSQUITOES**

**PRACTICE QUESTIONS**

1. The genus of mosquitoes which lay their eggs in rafts on the water surface is:
  - A. *Anopheles*.
  - B. *Aedes*.
  - C. *Culex*.
  - D. *Psorophora*.
  
2. Environmental conditions favoring long-term survival of adult mosquitoes include:
  - A. Heavy rainfall and strong winds.
  - B. Moderate temperatures and high humidity.
  - C. Hot temperatures and low humidity.
  - D. Short days and snowfall.
  
3. Mosquito larvae with no siphons are in the genus:
  - A. *Anopheles*.
  - B. *Aedes*.
  - C. *Culex*.
  - D. *Psorophora*.
  
4. A control technician identifying a problem mosquito as *Aedes sierrensis* should consider inspecting and treating which sources?
  - A. Snow-melt pools and river overflows.
  - B. Saltwater and freshwater marshes.
  - C. Treeholes and man-made containers.
  - D. Agricultural irrigation ponds.
  
5. The blood meal sources of most *Culex* mosquito species include:
  - A. Large and small mammals.
  - B. Cattle and humans.
  - C. Birds and small mammals.
  - D. None of the above.

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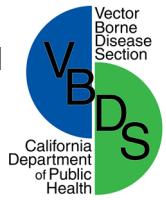


6. The western malaria mosquito is scientifically known as:
  - A. *Anopheles freeborni*
  - B. *Aedes aegypti*.
  - C. *Culex tarsalis*.
  - D. *Psorophora columbiae*.
  
7. The species of mosquito that deposits singular, desiccation resistant eggs:
  - A. *Culex pipiens*.
  - B. *Aedes albopictus*.
  - C. *Culex tarsalis*
  - D. *Culiseta inornata*.
  
8. Which species is not recognized as a malaria vector in California?
  - A. *Anopheles franciscanus*.
  - B. *Anopheles freeborni*.
  - C. *Anopheles hermsi*.
  - D. *Anopheles punctipennis*.
  
9. Saltwater marsh breeding mosquitoes in California include:
  - A. *Aedes ventrovittis* and *Aedes tahoensis*.
  - B. *Aedes melanimon* and *Aedes nigromaculis*.
  - C. *Aedes dorsalis* and *Aedes squamiger*
  - D. *Aedes sierrensis*.
  
10. *Culex erythrothorax* larvae are usually associated with:
  - A. Organic pollutants.
  - B. Swiftly moving water.
  - C. Treeholes.
  - D. Tule and cattail plants.

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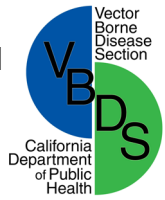
11. Water conditions generally conducive to mosquito development include:
  - A. Standing, clean water.
  - B. Swiftly moving water.
  - C. Standing, organically rich water.
  - D. Water standing for very short times
  
12. Categories of mosquito sources include:
  - A. Residential sources.
  - B. Community or industrial sources.
  - C. Agricultural sources.
  - D. All of the above.
  
13. Sources for *Aedes aegypti* include:
  - A. Saltwater marshes and sewage plants.
  - B. Lakes, streams, and snow-melt pools.
  - C. Fish ponds.
  - D. None of the above.
  
14. Transmission of human malaria involves female mosquitoes of the genus:
  - A. *Aedes*.
  - B. *Anopheles*.
  - C. *Culex*.
  - D. *Coquillettidia*.
  
15. The primary vector of arboviral encephalitides in California is:
  - A. *Culiseta incidens*.
  - B. *Culex stigmatosoma*
  - C. *Culex tarsalis*.
  - D. *Culiseta inornata*.
  
16. In a typical disease transmission cycle, the disease-causing organism is known as a:
  - A. Pathogen.
  - B. Vector.
  - C. Host.
  - D. Reservoir.

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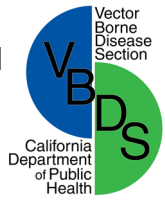
17. A method of reducing the risk of developing insecticide resistance in target mosquito populations is to:
- A. Rotate use of different pesticide classes.
  - B. Apply larger pesticide dosages.
  - C. Apply smaller pesticide doses more often.
  - D. Treat the source more often.
18. Another term for physical control is:
- A. Environmental manipulation.
  - B. Regulatory mechanisms.
  - C. Civic responsibilities.
  - D. Integrated management.
19. The scientifically planned control of mosquito populations through timely use of a variety of control strategies and methods is called:
- A. Biological mosquito control.
  - B. Chemical mosquito control.
  - C. Physical mosquito control.
  - D. Integrated pest management.
20. An essential element for successful adulticiding operations is the presence of:
- A. Hot temperatures.
  - B. A slight wind of 12 mph or more.
  - C. A thermal inversion layer.
  - D. All of the above.
21. In vector control, the term IPM stands for:
- A. Integrated Pest Management.
  - B. Insect Population Monitoring.
  - C. Insecticides, Pesticides, and Mosquitocides.
  - D. International Pesticide Machinery.

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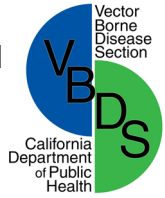
22. The primary mosquito problem associated with agricultural areas results from:
- A. Sources created by overflowing streams.
  - B. Sources associated with crop irrigation.
  - C. Ponding of rainfall.
  - D. Residential sources around farm buildings.
23. Physical control of mosquitoes in large lakes may be enhanced by:
- A. Creating numerous small islands.
  - B. Keeping shoreline depths shallow.
  - C. Removing emergent vegetation.
  - D. All of the above.
24. The objectives of good physical control practices for mosquito control are to:
- A. Prevent accumulation of water.
  - B. Prevent homeowner misuse of water.
  - C. Provide natural predators in salt marshes.
  - D. Use the least amount of pesticides.
25. The system of physical control most favored for mosquito control in coastal salt marshes where it can be used is:
- A. Drainage.
  - B. Filling.
  - C. Circulation of tidewater.
  - D. Impoundment of water.
26. Good physical control practices for mosquito control around residential areas include:
- A. Overturning all water holding containers.
  - B. Cleaning gutters, bird baths, and fountains.
  - C. Filling all tree holes with sand or cement.
  - D. All of the above.
27. A good agricultural practice contributing to physical control of mosquitoes in rice fields is:
- A. Circulation of tidewater.
  - B. Stocking with mosquitofish.
  - C. Good water-tight and weed-free levees.
  - D. Drainage to prevent standing water of more than 3 days in duration.

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28. Possible advantages of chemically controlling mosquitoes include:
- A. The need for repeated dosages over time.
  - B. Rapid control of mosquito populations.
  - C. Development of insecticide resistance.
  - D. No adverse environmental hazards.
29. Insecticides ready to use as supplied by the manufacturer without further dilution or mixing include:
- A. Granules.
  - B. Emulsions.
  - C. Solutions.
  - D. Wettable powders.
30. The movement of insecticides to non-target areas is known as:
- A. Insecticide application.
  - B. Spraying.
  - C. Drift.
  - D. Overspray.
31. Examples of biorational insecticides include:
- A. Diflubenzuron.
  - B. Methoprene.
  - C. *Bacillus thuringiensis var israelensis*.
  - D. Both B & C.
32. Insecticide resistance is defined as:
- A. Ability to withstand desiccation.
  - B. inability to undergo normal development.
  - C. Ability to withstand poisons lethal to earlier populations.
  - D. Ability to exhibit great variability.
33. Pyrethrums and pyrethrins are:
- A. Non-selective.
  - B. Derived from botanical origins.
  - C. Quick acting.
  - D. All of the above.

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34. The species of mosquito capable of vectoring the Zika virus
- A. *Culex tarsalis*.
  - B. *Aedes aegypti*.
  - C. *Aedes tahoensis*.
  - D. *Aedes dorsalis*.