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# Aquatic Environments CEU Course Answer Key

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***Please select one answer. You can circle, underline, bold or X the answer.  
No Intentional Trick Questions***

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## Aquatic Environments CEU Training Course Assignment

*The Assignment (Exam) is also available in Word on the Internet for your Convenience, please visit [www.ABCTLTC.com](http://www.ABCTLTC.com) and download the assignment and e-mail it back to TLC.*

You'll have 90 days from the start of this course to complete in order to receive your Professional Development Hours (**PDHs**) or Continuing Education Unit (**CEU**). A score of 70 % is necessary to pass this course. We prefer if this exam is proctored. No intentional trick questions. If you should need any assistance, please email all concerns and the completed manual to [info@tlch2o.com](mailto:info@tlch2o.com).

We would prefer that you utilize the enclosed answer sheet in the front, but if you are unable to do so, type out your own answer key. Please include your name and address on your manual and make copy for yourself. You can e-mail or fax your Answer Key along with the Registration Form to TLC. **(S) Means answer may be plural or singular. Answer Key in the front. Multiple Choice Section, One answer per question and please use the answer key.**

### Mosquito Introduction

1. About 3,000 species of mosquitoes with this missing term on a world-wide basis.
  - A. Lay their eggs
  - B. May produce
  - C. Have been described
  - D. Will only emerge
  - E. None of the Above
2. Scientists group species by genus on the basis of the physical characteristics they share. The 3,000 mosquito species found in the world with this missing term 28 different genera.
  - A. Lay their eggs
  - B. May produce
  - C. Divided among
  - D. Will only emerge
  - E. None of the Above
3. The genus *Aedes* contains some of the worst pests. Many members of the genus *Anopheles* have this missing term related to human malaria.
  - A. Lay their eggs
  - B. May produce
  - C. Ability to transmit
  - D. Will only emerge
  - E. None of the Above
4. Floodwater mosquitoes, such as *Aedes vexans*, this missing term in damp places just above the water line of temporary ponds.
  - A. Lay their eggs
  - B. May produce
  - C. Remain dormant
  - D. Will only emerge
  - E. None of the Above

5. The eggs hatch after a warm rain and with this missing term a new generation of adults in as little as a week.

- A. Lay their eggs
- B. May produce
- C. Remain dormant
- D. Will only emerge
- E. None of the Above

6. Eggs can also with this missing term for over two years during drought conditions.

- A. Lay their eggs
- B. May produce
- C. Remain dormant
- D. Will only emerge
- E. None of the Above

7. The adults will die from desiccation if exposed to dry sunny conditions and with this missing term from wooded areas at dusk or on dull, humid days.

- A. Lay their eggs
- B. May produce
- C. Remain dormant
- D. Will only emerge
- E. None of the Above

#### **Psorophora ciliata**

8. *Psorophora ciliata* is found only during this missing term summers when other mosquitoes are abundant.

- A. Wet
- B. Fertile
- C. Carnivorous
- D. Host-seek
- E. None of the Above

9. Their larvae are this missing term and each one consumes dozens of smaller mosquito larvae.

- A. Wet
- B. Fertile
- C. Carnivorous
- D. Host-seek
- E. None of the Above

#### **Why do Mosquitoes Bite?**

10. Mosquitoes belong to a group of insects that require blood to develop this missing term eggs.

- A. Wet
- B. Fertile
- C. Carnivorous
- D. Host-seek
- E. None of the Above



11. The females are the egg producers and " this missing term " for a blood meal.
- A. Wet
  - B. Fertile
  - C. Carnivorous
  - D. Host-seek
  - E. None of the Above
12. Few people realize that mosquitoes rely on this missing term as their main source of energy.
- A. Attractive
  - B. Liquids
  - C. Sugar
  - D. Blood
  - E. None of the Above
13. Both male and female mosquitoes feed on plant nectar, fruit juices, and this missing term that ooze from plants.
- A. Attractive
  - B. Liquids
  - C. Sugar
  - D. Blood
  - E. None of the Above
14. Which of the following terms is burned as fuel for flight and is replenished on a daily basis?
- A. Attractive
  - B. Liquids
  - C. Sugar
  - D. Blood
  - E. None of the Above

**Why do Mosquitoes Leave Welts When they Bite?**

15. When a female mosquito pierces the skin with her mouthparts, she injects a small amount of saliva into the wound before drawing?
- A. Attractive
  - B. Liquids
  - C. Sugar
  - D. Blood
  - E. None of the Above
16. Some people are highly attractive to mosquitoes and others are?
- A. Attractive
  - B. Liquids
  - C. Sugar
  - D. Blood
  - E. None of the Above

17. Mosquitoes have this missing term to satisfy and process many different factors before they feed.

- A. Attractive
- B. Liquids
- C. Sugar
- D. Blood
- E. None of the Above

18. Many of the mosquito's - this missing term- are poorly understood and many of the processes they use to evaluate potential blood meal hosts remain a mystery.

- A. Attractive
- B. Liquids
- C. Sugar
- D. Blood
- E. None of the Above

19. Which of the following terms mosquito is guided to our skin by following the slip stream of CO<sub>2</sub> that exudes from our breath?

- A. Colors
- B. Short-range
- C. Host-seeking
- D. None of the Above

#### **Short Range Attractants**

20. Once they have landed, they rely on a number of - this missing term- attractants to determine if we are an acceptable blood meal host.

- A. Colors
- B. Short-range
- C. Attractive
- D. Violent end
- E. None of the Above

21. Fragrances from hair sprays, perfumes, deodorants, and soap can cover these chemical cues. They can also function to either enhance or- this missing term- the host-seeking drive.

- A. Colors
- B. Short-range
- C. Attractive
- D. Repel
- E. None of the Above

22. Dark colors capture - this missing term- and make most people more attractive to mosquitoes.

- A. Colors
- B. Heat
- C. Attractive
- D. Violent end
- E. None of the Above

23. Which of the following terms refract heat and are generally less attractive to mosquitoes.
- A. Light Colors
  - B. Short-range
  - C. Attractive
  - D. Violent end
  - E. None of the Above
24. Only the mosquito knows why one person is more - this missing term- than another.
- A. Colors
  - B. Short-range
  - C. Attractive
  - D. Violent end
  - E. None of the Above

**How Long do Mosquitoes Live?**

25. Mosquitoes are relatively - this missing term- insects with an adult life span that lasts about 2 weeks.
- A. Colors
  - B. Fragile
  - C. Attractive
  - D. None of the Above
26. The vast majority meet a - this missing term- by serving as food for birds, dragonflies, and spiders, or are killed by the effects of wind, rain or drought.
- A. Colors
  - B. Short-range
  - C. Attractive
  - D. Violent end
  - E. None of the Above
27. The mosquito species that only have a single generation each year are longer lived and may persist in - this missing term- numbers for as long as 2-3 months if environmental conditions are favorable.
- A. Colors
  - B. Short-range
  - C. Small
  - D. Violent end
  - E. None of the Above
28. Mosquitoes that - this missing term- in the adult stage live for 6-8 months, but spend most of that time in a state of torpor.
- A. Life cycle
  - B. Hibernate
  - C. Saliva
  - D. Penetration
  - E. None of the Above

29. Some of the mosquito species found in arctic regions enter hibernation twice and take more than a year to complete their?
- A. Life cycle
  - B. Blood canal
  - C. Saliva
  - D. Penetration
  - E. None of the Above

**What Happens When Mosquitoes Bite?**

30. The saliva makes- this missing term- easier and prevents the blood from clotting in the narrow channel of her food canal.

- A. Life cycle
- B. Blood canal
- C. Saliva
- D. Penetration
- E. None of the Above

31. The welts that appear after the mosquito leaves is not a reaction to the wound but an - this missing term- reaction to the saliva injected to prevent clotting. In most cases, the itching sensation and swellings subside within several hours.

- A. Life cycle
- B. Blood canal
- C. Saliva
- D. Allergic
- E. None of the Above

32. Scratching the bites can result in infection if- this missing term- from the fingernails are introduced to the wounds.

- A. Life cycle
- B. Bacteria
- C. Saliva
- D. None of the Above

**33. Where do mosquitoes go in the winter?**

Mosquitoes, like most insects, are - this missing term- creatures.

- A. Life cycle
- B. Blood canal
- C. Saliva
- D. Cold-blooded
- E. None of the Above

34. Mosquitoes function best at 80°F, become - this missing term- at 60°F and cannot function below 50°F.

- A. Lethargic
- B. Blood canal
- C. Saliva
- D. Penetration
- E. None of the Above

### **Mosquito Life Cycle**

35. The type of standing water in which the mosquito chooses to lay her eggs depends upon the?

- A. Life cycle
- B. Blood canal
- C. Species
- D. Penetration
- E. None of the Above

36. The presence of beneficial predators such as - this missing term- nymphs in permanent ponds, lakes, and streams usually keep these bodies of water relatively free of mosquito larvae.

- A. Life cycle
- B. Fish and dragonfly
- C. Saliva
- D. None of the Above

37. Portions of marshes, swamps, clogged ditches, and temporary pools and puddles are all - this missing term- mosquito breeding sites.

- A. Life cycle
- B. Blood canal
- C. Prolific
- D. Penetration
- E. None of the Above

38. Other sites in which some species lay their eggs include tree - this missing term- such as old tires, buckets, toys, potted plant trays, and saucers and plastic covers or tarpaulins.

- A. Holes and containers
- B. Annoying and potentially dangerous
- C. Unique behaviors and bite
- D. Collect and flood
- E. None of the Above

39. Some of the most - this missing term- mosquito species, such as the Asian tiger mosquito, come from these sites.

- A. Holes and containers
- B. Annoying and potentially dangerous
- C. Unique behaviors and bite
- D. Collect and flood
- E. None of the Above

### **Wrigglers and Tumblers**

40. The mosquitoes in the United States, all of which live in specific habitats, exhibit - this missing term- different types of animals.

- A. Holes and containers
- B. Annoying and potentially dangerous
- C. Unique behaviors and bite
- D. Collect and flood
- E. None of the Above

41. After the female mosquito obtains a blood meal, she lays her eggs directly on the surface of stagnant water, in a depression, or on the edge of a container where rainwater may - this missing term- the eggs.
- A. Holes and containers
  - B. Annoying and potentially dangerous
  - C. Unique behaviors and bite
  - D. Collect and flood
  - E. None of the Above
42. Which of the following terms and a mosquito larva or "wiggler" emerges?
- A. Holes and containers
  - B. Annoying and potentially dangerous
  - C. Unique behaviors and bite
  - D. Eggs hatch
  - E. None of the Above
43. The pupa also - this missing term-, but no longer feeds.
- A. Holes and containers
  - B. Lives in the water
  - C. Unique behaviors and bite
  - D. None of the Above
44. Finally, the mosquito emerges from the pupal case and the water as a - this missing term-, ready to bite.
- A. Fully developed adult female
  - B. Annoying and potentially dangerous
  - C. Unique behaviors and bite
  - D. Collect and flood
  - E. None of the Above
45. Mosquitoes may overwinter as eggs, - this missing term.
- A. Fertilized adult females or larvae
  - B. Annoying and potentially dangerous
  - C. Unique behaviors and bite
  - D. Collect and flood
  - E. None of the Above
46. Some female mosquitoes lay their eggs?
- A. Holes and containers
  - B. Annoying and potentially dangerous
  - C. Unique behaviors and bite
  - D. Directly on the water surface
  - E. None of the Above
47. Others lay their eggs on substrates above the water line?
- A. Holes and containers
  - B. Annoying and potentially dangerous
  - C. The eggs hatch upon flooding
  - D. Collect and flood
  - E. None of the Above

48. Mosquitoes belonging to the genus - this missing term- lay their eggs in bunches or "rafts."

- A. Culex
- B. Tiger
- C. Apex
- D. Ariva
- E. None of the Above

49. Which of the following terms feed on bits of organic matter dispersed in the water, becoming full grown in about one week?

- A. Culex
- B. Larvae
- C. Female
- D. Male
- E. None of the Above

50. Which of the following terms mosquitoes are ready to bite one to two days after adult emergence?

- A. Culex
- B. Larvae
- C. Female
- D. Male
- E. None of the Above

51. Which of the following terms mosquitoes do not bite but feed on flower nectar or plant juices?

- A. Culex
- B. Larvae
- C. Female
- D. Male
- E. None of the Above

52. Which of the following terms may fly 5 to 10 miles, but usually rest in grass, shrubbery, or other foliage close to the water breeding area?

- A. Culex
- B. Larvae
- C. Adults
- D. Male
- E. None of the Above

### **Mosquito Habitats**

53. Few mosquito species in the U.S. breed in - this missing term-, such as streams.

- A. Running waters
- B. Stream volume
- C. Stream breeders
- D. Along banks
- E. None of the Above

54. Larvae can be flushed out when - this missing term- increases, and to remain in the stream requires a large amount of energy.

- A. Running waters
- B. Stream volume
- C. Stream breeders
- D. Along banks
- E. None of the Above

55. The tropical genus *Chagasia* and some *Anopheles* species are?

- A. Running waters
- B. Stream volume
- C. Stream breeders
- D. Along banks
- E. None of the Above

56. Stream breeders will find vegetation - this missing term- with which to anchor themselves or attempt to remain away from the main flow of the stream by seeking isolated eddies.

- A. Running waters
- B. Stream volume
- C. Stream breeders
- D. Along banks
- E. None of the Above

57. Transient water sources, such as - this missing term-, snowpools, and ditches, are used as breeding grounds for mosquito species whose eggs can withstand desiccation, such as *Aedes* and *Psorophora*.

- A. Running waters
- B. Stream volume
- C. Stream breeders
- D. Flooded areas
- E. None of the Above

58. Their life cycles require alternating periods of wet and dry. Other species, like an opportunistic *Culex*, might be able to pull off a single generation during an extended?

- A. Running waters
- B. Stream volume
- C. Flooded period
- D. Along banks
- E. None of the Above

59. Which of the following terms generally shows water quality changes which result in various mosquito species using the same pool over a period of time?

- A. Running waters
- B. Transient water
- C. Stream breeders
- D. None of the Above



60. Genera associated with - this missing term- are Anopheles, Culex, Culiseta, Coquillettia, and Uranotaenia.
- A. Running waters
  - B. Stream volume
  - C. Stream breeders
  - D. Permanent water
  - E. None of the Above
61. Eggs of these species are not desiccant-resistant and must be laid directly?
- A. Running waters
  - B. On the water
  - C. Stream breeders
  - D. Along banks
  - E. None of the Above
62. As with transient waters, there is a seasonal change in the vegetation, - this missing term-, and mosquito species present.
- A. Water quality
  - B. Stream volume
  - C. Breeders
  - D. Along banks
  - E. None of the Above
63. Culiseta are found in - this missing term- formed by pockets of water surrounding tree roots.
- A. Running waters
  - B. Stream volume
  - C. Crypts
  - D. Along banks
  - E. None of the Above

### **Containers**

64. Which of the following terms -sites generally have tannin-enriched water, which is characteristically clear, with rotting wood at the bottom?
- A. Treehole
  - B. Insulation
  - C. Containers
  - D. Artificial
  - E. None of the Above
65. Which of the following terms - species now also use artificial sites, such as tires, since they provide insulation against the weather and are more numerous?
- A. Treehole
  - B. Insulation
  - C. Containers
  - D. Artificial
  - E. None of the Above

66. Artificial - this missing term- are a convenient mode of transporting a species of mosquito outside of its natural range.
- A. Treehole
  - B. Insulation
  - C. Containers
  - D. Reservoirs
  - E. None of the Above

### **Mosquito Control Section**

67. The mission of the Environmental Protection Agency (EPA) is to - this missing term- and the environment.

- A. Protect human health
- B. Minimize the risk of human exposure
- C. Conduct surveillance for diseases
- D. Evaluating larval populations
- E. None of the Above

68. The EPA reviews and approves pesticides and their labeling to ensure that the pesticides used to protect public health are applied by methods which - this missing term- and adverse health and environmental effects.

- A. Protect human health
- B. Minimize the risk of human exposure
- C. Conduct surveillance for diseases
- D. Evaluating larval populations

### **How Are Mosquitoes Controlled with Pesticides and Other Methods?**

69. Mosquito specialists - this missing term- harbored by domestic and nonnative birds, including sentinel chickens and mosquitoes.

- A. Protect human health
- B. Minimize the risk of human exposure
- C. Conduct surveillance for diseases
- D. None of the Above

70. Surveillance for larval habitats is conducted by using maps and aerial photographs, and by?

- A. Protect human health
- B. Minimize the risk of human exposure
- C. Conduct surveillance for diseases
- D. Evaluating larval populations
- E. None of the Above

71. Other techniques include various light traps, biting counts, and?

- A. Protect human health
- B. Minimize the risk of human exposure
- C. Analysis of reports from the public
- D. Evaluating larval populations
- E. None of the Above

72. Mosquito control programs also put high priority on trying to - this missing term-, so that additional controls may not be necessary.

- A. Protect human health
- B. Minimize the risk of human exposure
- C. Conduct surveillance for diseases
- D. Prevent a large population of adult mosquitoes from developing
- E. None of the Above

73. Since mosquitoes must have water to breed, methods of prevention may include controlling water levels in lakes, marshes, ditches, or other mosquito breeding sites, - this missing term- if possible, and stocking bodies of water with fish species that feed on larvae.

- A. Eliminating small breeding sites
- B. Minimize the risk of human exposure
- C. Conduct surveillance for diseases
- D. Evaluating larval populations
- E. None of the Above

74. Both chemical and biological measures may be employed to - this missing term- during larval stages.

- A. Protect human health
- B. Minimize the risk of human exposure
- C. Conduct surveillance for diseases
- D. Kill immature mosquitoes
- E. None of the Above

### **Larvicides**

75. Which of the following terms – target larvae in the breeding habitat before they can mature into adult mosquitoes and disperse?

- A. Larvicides
- B. Mineral oils
- C. Liquid
- D. Mosquito controllers
- E. None of the Above

76. Which of the following terms – include the bacterial insecticides *Bacillus thuringiensis israelensis* and *Bacillus sphaericus*, the insect growth inhibitor methoprene, and the organophosphate insecticide temephos?

- A. Larvicides
- B. Mineral oils
- C. Liquid
- D. Mosquito controllers
- E. None of the Above

77. Which of the following terms – and other materials form a thin film on the surface of the water, which cause larvae and pupae to drown?

- A. Larvicides
- B. Mineral oils
- C. Liquid
- D. Mosquito controllers
- E. None of the Above

78. Which of the following terms – larvicide products are applied directly to water using backpack sprayers and truck or aircraft-mounted sprayers?

- A. Larvicides
- B. Mineral oils
- C. Liquid
- D. Mosquito controllers
- E. None of the Above

**Methoprene (Altosid XR)**

79. Methoprene is another safe material for control of mosquito larvae. It is an insect hormone that - this missing term- of larvae and prevents mosquitoes from developing into adults.

- A. Retards the development
- B. Can be placed even on ice for season-long control
- C. 150 days of uninterrupted mosquito control
- D. Labeled for use in known fish habitats
- E. None of the Above

**Altosid XR Briquettes**

80. Altosid XR Briquettes \_\_\_\_\_ . Treat swamps, ponds, and marsh areas in early spring before thawing.

- A. Retards the development
- B. Can be placed even on ice for season-long control
- C. 150 days of uninterrupted mosquito control
- D. Labeled for use in known fish habitats
- E. None of the Above

81. These extended-release briquettes will provide up to - this missing term- once they hit the water.

- A. Retards the development
- B. Can be placed even on ice for season-long control
- C. 150 days of uninterrupted mosquito control
- D. Labeled for use in known fish habitats
- E. None of the Above

82. They can be applied by hand and the product is?

- A. Retards the development
- B. Can be placed even on ice for season-long control
- C. 150 days of uninterrupted mosquito control
- D. Labeled for use in known fish habitats
- E. None of the Above

**Microbial insecticides**

83. When the bacteria Bti encysts?

- A. Retards the development
- B. Can be placed even on ice for season-long control
- C. It produces a protein crystal toxic to mosquito and midge larvae
- D. Labeled for use in known fish habitats
- E. None of the Above

84. Once the bacterium has been ingested?
- A. Retards the development
  - B. Can be placed even on ice for season-long control
  - C. 150 days of uninterrupted mosquito control
  - D. The toxin disrupts the lining of the larvae's intestine
  - E. None of the Above

**Mosquito Dunks or Briquettes**

85. Which of the following terms – are objects that release bacteria into water where mosquitoes are breeding?
- A. Small donut shaped and sized
  - B. Can be placed even on ice for season-long control
  - C. 150 days of uninterrupted mosquito control
  - D. None of the Above

**Juvenile Hormone**

86. Methoprene is an insect growth regulator widely used by abatement districts to?
- A. Retards the development
  - B. Can be placed even on ice for season-long control
  - C. Control mosquito larvae
  - D. Labeled for use in known fish habitats
  - E. None of the Above

87. Methoprene \_\_\_\_\_, and when present in the larval habitat, it keeps immature insects from maturing into adults.
- A. Retards the development
  - B. Can be placed even on ice for season-long control
  - C. Mimics a natural juvenile hormone
  - D. Labeled for use in known fish habitats
  - E. None of the Above

88. Unable to metamorphose, the mosquitoes?
- A. Retards the development
  - B. Can be placed even on ice for season-long control
  - C. Die in the pupal stage
  - D. Labeled for use in known fish habitats
  - E. None of the Above

89. Vector control technicians sometimes use methoprene to reach larval sources that would?
- A. Retards the development
  - B. Can be placed even on ice for season-long control
  - C. Otherwise be difficult or dangerous to treat
  - D. Labeled for use in known fish habitats
  - E. None of the Above

90. Pellets – this missing term -into underground septic tanks known to be breeding house mosquitoes.

- A. Retards the development
- B. Can be placed even on ice for season-long control
- C. 150 days of uninterrupted mosquito control
- D. Can be flushed down toilets
- E. None of the Above

91. The methoprene kills the mosquitoes without upsetting the septic system's?

- A. Retards the development
- B. Can be placed even on ice for season-long control
- C. 150 days of uninterrupted mosquito control
- D. Bacterial digestive processes
- E. None of the Above

### **Larvicidal Oils**

92. The Marin / Sonoma District in California uses – this missing term-, a light-viscosity oil that spreads quickly and evenly over the water surface, preventing larvae and pupae from obtaining oxygen through the surface film.

- A. Golden Bear 1111
- B. Oils
- C. Chlorinated hydrocarbons
- D. Chlordane
- E. None of the Above

93. Which of the following terms – have always been used as a product of last resort for the control of mosquito pupae, since this stage does not feed but does require oxygen.

- A. Golden Bear 1111
- B. Oils
- C. Chlorinated hydrocarbons
- D. Chlordane
- E. None of the Above

### **Chemical Larvicides**

94. Chlorinated hydrocarbons like DDT and – this missing term- are very much a thing of the past, as are the use of organophosphate and carbamate insecticides.

- A. Golden Bear 1111
- B. Oils
- C. Chlorinated hydrocarbons
- D. Chlordane
- E. None of the Above

95. Which of the following terms – were removed from the US market in 1964, and in 1987?

- A. Golden Bear 1111
- B. Oils
- C. Chlorinated hydrocarbons
- D. Chlordane
- E. None of the Above

### **Adulticides**

96. Which of the following terms – control may be undertaken to combat an outbreak of mosquito-borne disease or a very heavy nuisance infestation of mosquitoes in a community?

- A. Golden Bear 1111
- B. Oils
- C. Chlorinated hydrocarbons
- D. Chlordane
- E. None of the Above

97. Pesticides registered for this use are –this missing term- and are applied either by aircraft or on the ground, employing truck-mounted sprayers.

- A. Golden Bear 1111
- B. Oils
- C. Chlorinated hydrocarbons
- D. Adulticides
- E. None of the Above

98. State and local agencies commonly use – this missing term- Malathion and Naled and the synthetic pyrethroid insecticides Permethrin, Resmethrin, and Sumithrin for adult mosquito control.

- A. Golden Bear 1111
- B. Oils
- C. Organophosphate insecticides
- D. Chlordane
- E. None of the Above

99. Which of the following terms – sprayers dispense very fine aerosol droplets that stay aloft and kill flying mosquitoes on contact?

- A. Golden Bear 1111
- B. Oils
- C. Ultra-low volume (ULV)
- D. Chlordane
- E. None of the Above

100. Which of the following terms – applications involve small quantities of pesticide active ingredient in relation to the size of the area treated?

- A. Golden Bear 1111
- B. ULV
- C. Chlorinated hydrocarbons
- D. None of the Above

### **Commonly used terms, most will come from the Glossary Section**

101. A plant that traps and ingests insects for nutrition.

- A. Marginal plant
- B. Submerged plant
- C. Invasive plant
- D. Carnivorous plant
- E. None of the Above

102. Which aquatic plants that are submerged or rooted 12" to 36" in depth.

- A. Marginal plant
- B. Submerged plant
- C. Invasive plant
- D. Deep water plant
- E. None of the Above

103. A plant that requires permanently moist or wet conditions.

- A. Marginal plant
- B. Submerged plant
- C. Invasive plant
- D. Deep water plant
- E. None of the Above

104. A plant that remains submerged below the water line.

- A. Marginal plant
- B. Submerged plant
- C. Invasive plant
- D. Deep water plant
- E. None of the Above

105. A plant that is grown in normal soil conditions.

- A. Marginal plant
- B. Submerged plant
- C. Terrestrial plant
- D. Deep water plant
- E. None of the Above

106. Forward or upward.

- A. Apocarpous
- B. Apiculate
- C. Antrorse
- D. Apical bud
- E. None of the Above

107. Having flowers without petals; having no corolla.

- A. Apocarpous
- B. Apiculate
- C. Antrorse
- D. None of the Above

108. The tip or top of a thing at the tip or summit.

- A. Apocarpous
- B. Apiculate
- C. Antrorse
- D. Apical
- E. None of the Above



109. The principal growing point of the stem.
- A. Apocarpous
  - B. Apiculate
  - C. Antrorse
  - D. Apical bud
  - E. None of the Above
110. Terminated abruptly by a small, distinct point, an apiculus or apicule.
- A. Apocarpous
  - B. Apiculate
  - C. Antrorse
  - D. Apical bud
  - E. None of the Above
111. Having separate carpels.
- A. Apocarpous
  - B. Apiculate
  - C. Antrorse
  - D. Apical bud
  - E. None of the Above
112. Having joints; jointed; provided with places where separation may take place.
- A. Attenuate
  - B. Articulate
  - C. Asepalous
  - D. Ascending
  - E. None of the Above
113. Rising or curving upward.
- A. Attenuate
  - B. Articulate
  - C. Asepalous
  - D. Ascending
  - E. None of the Above
114. Without sepals.
- A. Attenuate
  - B. Articulate
  - C. Asepalous
  - D. Ascending
  - E. None of the Above
115. Any form of reproduction that does not require the union of male and female reproductive material.
- A. Attenuate
  - B. Articulate
  - C. Asepalous
  - D. Asexual reproduction
  - E. None of the Above

116. Gradually narrowed to a long point at apex or base.
- A. Attenuate
  - B. Articulate
  - C. Asepalous
  - D. Ascending
  - E. None of the Above
117. Any ear-like lobed appendages.
- A. Attenuate
  - B. Articulate
  - C. Asepalous
  - D. Ascending
  - E. None of the Above
118. Self-fertilization, pollination of a flower by its own pollen.
- A. Aquatic vascular plants
  - B. Autogamy
  - C. Aril
  - D. Arcuate
  - E. None of the Above
119. An additional covering that forms on some seeds after fertilization, and developing from the stalk of the ovule.
- A. Aquatic vascular plants
  - B. Autogamy
  - C. Aril
  - D. Arcuate
  - E. None of the Above
120. Aquatic plants containing the conductive vascular tissue, phloem and xylem.
- A. Aquatic vascular plants
  - B. Autogamy
  - C. Aril
  - D. None of the Above
121. Bent or curved in the form of a bow.
- A. Aquatic vascular plants
  - B. Autogamy
  - C. Aril
  - D. Arcuate
  - E. None of the Above
122. Growth promoting hormones that cause cell elongation, and are responsible for many developmental responses including phototropism.
- A. Aquatic vascular plants
  - B. Autogamy
  - C. Aril
  - D. Auxins
  - E. None of the Above

123. A stiff, bristlelike appendage, usually at the end of a structure.
- A. Axillary bud
  - B. Awn
  - C. Axil
  - D. None of the Above
124. The angle found between any two organs or structures.
- A. Axillary bud
  - B. Awn
  - C. Axil
  - D. Axillary
  - E. None of the Above
125. The junction of the leaf or petiole and the stem.
- A. Axillary bud
  - B. Awn
  - C. Axil
  - D. Axillary
  - E. None of the Above
126. In an axil, growing in an axil, as buds.
- A. Axillary bud
  - B. Awn
  - C. Axil
  - D. Axillary
  - E. None of the Above
127. A vigorously growing plant that will quickly overwhelm native or slower growing plants.
- A. Marginal plant
  - B. Submerged plant
  - C. Invasive plant
  - D. Deep water plant
  - E. None of the Above
128. A part of a sea or lake indenting the shore line; the word is often applied to very large tracts of water around which the land forms a curve, as Hudson's Bay.
- A. Barbel
  - B. Bayou
  - C. Bay
  - D. Barbellate
  - E. None of the Above
129. Having no stem or seemingly without a stem.
- A. Acaulescent
  - B. Achene
  - C. Absorption
  - D. Abaxial
  - E. None of the Above

130. Sepal and petal organs found on flowers. The sepals and petals are not essential for pollination but may aid in attracting insects or other organisms.

- A. Acaulescent
- B. Achene
- C. Absorption
- D. Accessory flower parts
- E. None of the Above

131. That surface of any structure which is remote or turned away from the axis, such as the lower surface of a leaf.

- A. Acaulescent
- B. Achene
- C. Absorption
- D. Abaxial
- E. None of the Above

132. The process by which a filter media traps unwanted molecules.

- A. Acaulescent
- B. Achene
- C. Absorption
- D. Abaxial
- E. None of the Above

133. Any small, dry fruit with one seed whose outer covering (pericarp) does not burst when ripe.

- A. Acaulescent
- B. Achene
- C. Absorption
- D. Abaxial
- E. None of the Above

134. A plant requiring two years in which to complete its life cycle, the first year growing only vegetatively, the second flowering, fruiting, then dying.

- A. Berry
- B. Bilateral
- C. Bilabiate
- D. Biennial
- E. None of the Above

135. Forked; divided by a cleft.

- A. Berry
- B. Bilateral
- C. Bilabiate
- D. Bifid
- E. None of the Above

136. Having two lips, as a bilabiate corolla of a flower.

- A. Berry
- B. Bilateral
- C. Bilabiate
- D. Bifid
- E. None of the Above

137. Having two sides.

- A. Berry
- B. Bilateral
- C. Bilabiate
- D. Bifid
- E. None of the Above

138. Said of corolla or calyx (or flower) when divisible into equal halves in one plane only; zygomorphic.

- A. Berry
- B. Bilateral
- C. Bilabiate
- D. None of the Above

139. A marshy inlet or outlet of a lake, river, etc.; also a backwater.

- A. Barbel
- B. Bayou
- C. Bay
- D. None of the Above

140. Whisker-like growths around the mouth, used for finding food and communication; a sensory organ.

- A. Barbel
- B. Bayou
- C. Bay
- D. Barbellate
- E. None of the Above

141. Provided, usually laterally, with fine, short points or barbs.

- A. Barbel
- B. Bayou
- C. Bay
- D. Barbellate
- E. None of the Above

142. Any fleshy simple fruit with one or more seeds and a skin, as a tomato, cranberry, banana, grape, etc.; a several-sided indehiscent fruit with a fleshy pericarp and without a stony layer surrounding the seeds.

- A. Berry
- B. Bilateral
- C. Bilabiate
- D. Bifid
- E. None of the Above

143. Natural environment of an organism.

- A. Bracteole
- B. Bracteolate
- C. Bisexual
- D. Biotope
- E. None of the Above

144. Leaf formed of several leaflets set on either side of the petiole.

- A. Bracteole
- B. Bracteolate
- C. Bisexual
- D. Bipinnate
- E. None of the Above

145. Having both female and male reproductive organs present and functional in the same flower; hermaphrodite; amphisporangiate; said of a plant having all bisexual flowers.

- A. Bracteole
- B. Bracteolate
- C. Bisexual
- D. Bipinnate
- E. None of the Above

146. Furnished with bracteoles.

- A. Bracteole
- B. Bracteolate
- C. Bisexual
- D. Bipinnate
- E. None of the Above

147. A small bract; especially one on a floral axis.

- A. Bracteole
- B. Bracteolate
- C. Bisexual
- D. Bipinnate
- E. None of the Above

148. The leaf of a plant, especially grass; the flat or expanded portion of a leaf; lamina.

- A. Bloom
- B. Blossom
- C. Blade
- D. Bog
- E. None of the Above

149. Developing upward from the base toward the apex.

- A. Adaxial
- B. Acuminate
- C. Acumen
- D. Actinomorphic
- E. None of the Above

150. Descriptive of a flower or set of flower parts which can be cut through the center into equal and similar parts along two or more planes; having radial symmetry.

- A. Adaxial
- B. Acuminate
- C. Actinomorphic
- D. None of the Above