

# MASSACHUSETTS ENVIR<sup>THON</sup>

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## Sample Questions

Take this quiz on-line at <http://www.maenvirothon.org/quiz.htm>

### Water

1. Which species is not native to Massachusetts

- ☐ Cattails
- ☐ white Water Lilly
- ☐ Bladderwort
- ☐ Fanwort

2. The area of rapid temperature change in a thermally stratified waterbody is called the

- ☐ Hypolimnion
- ☐ Transition Zone
- ☐ Thermocline
- ☐ Temperature gradient

3. Which whale does not have baleen?

- ☐ Sperm Whale
- ☐ Humpback Whale
- ☐ Blue Whale
- ☐ Right Whale

4. The area in the waterbody where light is still able to penetrate is called the

- ☐ Aphotic Zone
- ☐ Benthic Zone
- ☐ Pelagic Zone
- ☐ Photic Zone

5. Water with a pH greater than 7 is more alkaline and has more

- ☐ hydronium ions
- ☐ hydrogen ions
- ☐ hydroxyl ions
- ☐ hydronic ions

6. A measure of the oxygen-consuming life in the waterbody is called the

- ☐ Aphotic measure
- ☐ Eutrophic Status
- ☐ Dissolved Oxygen Value
- ☐ Biochemical Oxygen Demand

### Forestry

1. Plants that have "naked" seeds and do not protect their seeds inside fruit are called?

- ☐ Vascular Plants
- ☐ Deciduous
- ☐ Angiosperms
- ☐ Gymnosperms

2. Early Europeans found New England forest dominated by?

- ☐ Red Oak, White Pine, Hemlock
- ☐ Red Maple, White Pine, Douglas Fir
- ☐ Beech, Birch, Ash
- ☐ White Oak, Red Maple, Cedar

3. Which epidemic did not affect New England tree populations?

- ☐ Dutch Elm Disease
- ☐ White Pine Fungus
- ☐ Gypsy Moth
- ☐ Chestnut Blight

4. During photosynthesis, carbon dioxide and water are converted to what?

- ☐  $O_2 + NH_4 + 2CO_2$
- ☐  $2CO_2 + 1 H_2O_2 + O_2$
- ☐  $C_6H_{12}O_6 + 6O_2 + 6H_2O$
- ☐  $C_6H_{12}O_6 + 2CO_2 + H_2O_2$

5. When the tree's crown is visible, you can estimate the tree's height using a

- ☐ clinometer
- ☐ altimeter
- ☐ altometer
- ☐ cinameter

6. The chemical portion of integrated pest management uses all of these methods except

- ☐ pesticides
- ☐ pheromone behavior modifiers
- ☐ *Bacillus thuringiensis*
- ☐ fumigants

## Soil

1. The parent material produced by the weathering of a rock in place is called
  - ☐ a) Erosion
  - ☐ b) Alluvium
  - ☐ c) Residuum
  - ☐ d) Sedimentation
2. The broad term for all material swept out, sorted and deposited beyond the glacial ice front by streams of melt water is called
  - ☐ Glacial Outwash
  - ☐ Glacial Beach Deposits
  - ☐ Glaciolacustrine deposits
  - ☐ Drumlins
3. Massachusetts was covered with glacial ice
  - ☐ 25,000-30,000 years ago
  - ☐ 9,000-10,000 years ago
  - ☐ 18,000-20,000 years ago
  - ☐ 12,000-14,000 years ago
4. A horizontal layer of soil that has distinct characteristics is called a
  - ☐ soil profile
  - ☐ soil layer
  - ☐ soil horizon
  - ☐ soil feature
5. This texture class when moist, will form a cast but crumble when touched
  - ☐ Sandy loam
  - ☐ silt loam
  - ☐ loam
  - ☐ sand
6. The removal of soil through the cutting of many small, conspicuous channels that can not be obliterated by ordinary tillage is called
  - ☐ Gully erosion
  - ☐ Rill erosion
  - ☐ Sheet erosion
  - ☐ Accelerated erosion
7. Soils that have mostly grey colors in the upper B horizon and thick accumulations of organic matter are
  - ☐ Hydric soils
  - ☐ Organic Soils
  - ☐ Hydrological soils
  - ☐ Fluvial soils

## Wildlife

1. What animals survive freezing temperatures by turning their body fluids into glycerol (antifreeze)?
  - ☐ Ectotherms
  - ☐ Endoregulators
  - ☐ Poikilotherms
  - ☐ Poikoregulators
2. Plants or fungi that obtain their nourishment from dead plant or animal material are called
  - ☐ Spongioforms
  - ☐ Saprophytes
  - ☐ Angiosperms
  - ☐ Fungiforms
3. Which species is a marsupial?
  - ☐ Fisher
  - ☐ Porcupine
  - ☐ Opossum
  - ☐ Flying Squirrel
4. Which of the following New England species hibernates?
  - ☐ Black Bear
  - ☐ Woodchuck
  - ☐ Monarch Butterfly
  - ☐ Lesser Shrew
5. Which species is frequently found in a vernal pool?
  - ☐ Fairy Shrimp
  - ☐ Minnow
  - ☐ Asian Clam
  - ☐ Fairy Frog
6. The response of an organism to the fluctuation between light and dark over a 24hr period is called
  - ☐ Solar Cycle
  - ☐ Diurnal Rhythm
  - ☐ Photosynthesis
  - ☐ Circadian Rhythm
7. Which of the following species is considered threatened?
  - ☐ Lake Chub
  - ☐ Timber Rattlesnake
  - ☐ Eastern Spadefoot
  - ☐ Bald Eagle