

Envirothon 2007
Wood County
Aquatics Eco-Station

1. In the 1970's, the Tellico Dam was being built on the Little Tennessee River. This dam was intended to control flooding as well as generate hydroelectric power. There was a heated dispute about the completion of the dam and the U.S. Supreme Court ruled that construction of the dam must be stopped due to the fact that an endangered species would be destroyed when the dam went into operation. What was the species that would be threatened by the habitat destruction that this dam would cause?

 - A. rainbow trout
 - B. Johnny darter
 - C. snail darter**
 - D. gila trout
2. The construction of the Tellico Dam was indeed completed when the U.S. Congress granted certain exemptions to the Endangered Species Act. One way a project like the Tellico Dam could be exempted is if an Endangered Species Review Committee decided that the economic benefits outweighed the potential harm to an endangered species. What action was taken to provide benefit to the endangered species while at the same time allowing for the dam to go into operation?

 - A. the endangered species was transplanted to nearby streams and allowed to thrive there**
 - B. the endangered species was cloned and its numbers in the population were thereby increased making it no longer an endangered species
 - C. the endangered species was allowed to escape through the completed dam through sluice gates designed to allow the individuals to pass through unharmed
 - D. the endangered species was eliminated and is now considered extinct so it is no longer a problem in that or any other ecosystem
3. What is the advantage of building a dam on a river?

 - A. provides escape for endangered species which are fleeing the fast-moving water of the river
 - B. provides recreational activities and drinking water for people living in the community
 - C. provides a clean and renewable source of electricity for people living in the area
 - D. both choices B and C**
4. What is the disadvantage of building a dam on a river?

 - A. the cost of building a dam is very high**
 - B. the reservoir created behind the dam can produce catastrophic floods
 - C. the dam separates ecosystems both up stream and down stream
 - D. the reservoir can become polluted by industrial runoff

5. What is the generation of energy via a turbine that is placed at the base of a dam parallel to the seashore that spins when the tides come in or out?
- A. OTEC
 - B. tidal energy system
 - C. hydroelectric energy
 - D. **Both B and C**
6. What is the generation of energy via a turbine and machinery that uses the difference between deep-ocean water and warm surface water to generate electricity?
- A. OTEC
 - B. tidal energy system
 - C. hydroelectric energy
 - D. **Both A and C**
7. What would be the best location for a tidal energy system?
- A. Bay of Florida
 - B. Lake Superior
 - C. Gulf of Mexico
 - D. **Bay of Fundy**
8. What would be the best location for OTEC?
- A. New York
 - B. **Hawaii**
 - C. Lake Erie
 - D. The Great Salt Lake
9. An old growth forest is considered to be
- A. a renewable resource
 - B. **a non renewable resource**
 - C. a microclimate
 - D. poor in biodiversity
10. Why are fossil fuels nonrenewable?
- A. **They require hundreds of millions of years to form.**
 - B. Their ecosystems change forever when they are burned.
 - C. They are converted to carbon dioxide when they are burned.
 - D. They exist in a very small supply.
11. Using renewable resources while ensuring that they are not depleted is a practice called
- A. **sustainable development**
 - B. biological magnification
 - C. monoculture
 - D. subsistence hunting
12. The leading renewable energy source used by electric utilities to generate power is
- A. timber
 - B. solar energy
 - C. **hydropower**
 - D. biodiesel fuel

13. Compared to nuclear power plants, hydropower is better because
- A. **it produces less thermal pollution than nuclear power productions**
 - B. it produces less air pollution than nuclear power production
 - C. it has a lesser impact on wildlife than nuclear power production
 - D. none of the above
14. Ohio currently has _____ active nuclear power plants.
- A. 1
 - B. **2**
 - C. 3
 - D. 4
15. The harvesting of wind energy by turbines is done primarily in the
- A. northeastern US
 - B. southwestern US
 - C. **western coastal US**
 - D. eastern costal US
16. Which alternative energy source has the fewest negative impacts on environmental quality?
- A. wind energy
 - B. **solar energy**
 - C. hydropower
 - D. nuclear energy
17. Currently, hydropower supplies _____ of the electricity produced by nonrenewable resources in the US.
- A. 20%
 - B. 40%
 - C. 60%
 - D. **80%**
18. The region of the US that relies the heaviest on hydropower is
- A. the New England states
 - B. the Central Plains
 - C. **the Pacific Northwest**
 - D. the Upper Midwestern states
19. Hydropower facilities in the Pacific Northwest have contributed to the decline of the
- A. Coho salmon populations
 - B. Chinook salmon populations
 - C. sockeye salmon populations
 - D. **all of the above populations**
20. Explain the purpose of the cooling tower at Davis-Besse Nuclear Power Plant
- A. to produce steam to make electricity
 - B. to release excess radioactive gasses safely in the upper atmosphere
 - C. **to cool water before releasing it into Lake Erie**
 - D. all of the above

21. The Bayshore Power Station near Oregon, Ohio draws water from Maumee Bay, along with millions of fish trapped on their protective screens. This screening of fish is called:
- A. Entrapment
 - B. Entrainment
 - C. Impingement**
 - D. Encapsulation
22. In an effort to reduce dependence on foreign oil, farmers will be encouraged to produce crops that can be turned into Ethanol, which can be produced from
- A. corn
 - B. switchgrass
 - C. sawdust
 - D. all of the above**
23. Microcystis and other blue-green algae require the following combination to create a large bloom:
- A. high levels of phosphorus and warm water**
 - B. high levels of nitrogen and warm water
 - C. high levels of phosphorus and cool water
 - D. high levels of nitrogen and cool water
24. Name a predator of Zebra mussels in Lake Erie
- A. round gobies
 - B. freshwater drum
 - C. diving ducks
 - D. all of the above**
25. Name the 2 migratory waterfowl flyways passing through Western Lake Erie
- A. Central and Mississippi
 - B. Mississippi and Atlantic**
 - C. Atlantic and Central
 - D. Pacific and Atlantic