



4.0 Human activity affects biological diversity

Student Name _____

Class _____

4.1 Reduction of Biological Diversity

1. The decline in biological diversity around the world is being stressed by all of the following human activities EXCEPT ...
 - A. urbanization
 - B. agriculture
 - C. forestry
 - D. politics

2. The reduction of biological diversity is due to degradation of ecosystems, the extinction of some species and the decrease in other species populations. Strategies to preserve important habitats and the species that depend on them include ...
 - A. nature preserves and national parks
 - B. amusement parks and zoos
 - C. wild animal farms and animal shelters
 - D. nature trails and off-road recreation areas

3. **Extinction** is the complete disappearance of a species from the entire planet. This happened to the dodo bird, a flightless bird that lived on the island of Mautitius, in the Indian Ocean. The dodo became extinct when Portuguese explorers brought their domestic pets with them when they first landed on the island. The explorers used the dodo bird as food, but the reason the dodo became extinct is because the domestic animals ...
 - A. chased the dodo until it had a heart attack
 - B. ate all of the dodo bird's eggs
 - C. attacked the defenseless dodo bird for fun
 - D. lured the dodo bird to the water, where it drowned

4. Scientists think the extinction of the dinosaurs occurred because of a catastrophic event. Other species also became extinct because of catastrophic events. One such event, the **Pleistocene epoch** is the last major event to occur, nearly 1.8 billion years ago. It is commonly referred to as ...
 - A. Doomsday
 - B. The Ice Age
 - C. Armageddon
 - D. A Meteor Impact

5. Extirpation is a local extinction, or the disappearance of a species from a particular area. Of the species that are listed below, only one was extirpated completely from Canada. It was the ...
 - A. Swift Fox
 - B. Snowy Owl
 - C. Grizzly Bear
 - D. Woodland Caribou

6. The species that is currently at risk to be extirpated from the boreal forests of Northern Alberta, because of habitat degradation resulting from logging, forest fires, and increased interspecies competition is the ...
 - A. Swift Fox
 - B. Snowy Owl
 - C. Grizzly Bear
 - D. Woodland Caribou



7. The **Alberta Department of Environmental Protection** is working with wildlife conservation groups around the world to save species at-risk. Alberta Environmental Protection is working with this group to reintroduce the swift fox to Canada ...
 - A. World Wildlife Fund
 - B. Swift Fox Conservation Group
 - C. Environmental Protection Agency
 - D. World Wildlife Conservation Association

8. If a species is at risk to be endangered, and it is particularly vulnerable to natural events or human activities its status is regarded as ...
 - A. Illegal
 - B. Threatened
 - C. Of Special Concern
 - D. Extirpated

9. Natural selection is usually a slow process. When the environment changes drastically – making it difficult for a species to adapt, the species may not survive. All of the following are naturally occurring events that have caused extinctions or extirpations, EXCEPT for ...
 - A. disease
 - B. volcanic eruptions and forest fires
 - C. lack of food due to overpopulation
 - D. pollution of the atmosphere

10. One of the most numerous trees in the forests of the eastern United States was the **American Chestnut Tree**. The nuts produced by the tree were a source of food for wildlife, livestock and humans. A disease, called the **chestnut blight**, carried over from Europe, basically destroyed all the trees. The disease, was caused by a ...
 - A. parasite
 - B. bacteria
 - C. fungus
 - D. mould

11. Sometimes organisms have adaptations that suit them only to a very specific set of environmental conditions. Biologists call this natural cause of extinction ...
 - A. inter-specialization
 - B. overspecialization
 - C. super-specialization
 - D. adaptive specialization

12. Humans can also affect the populations of species. When human activities change the environment, extinctions and extirpations can occur. The burning of the rainforests in South America is a good example of ...
 - A. habitat destruction
 - B. non-native species
 - C. over-hunting
 - D. regional diversity

13. Sometimes species are extirpated on purpose, because they are considered a menace. The very last passenger pigeon died in captivity on September 1, 1914. The reason that the passenger pigeon became extinct was as a result of ...
 - A. need for food
 - B. habitat destroyed
 - C. sport hunting
 - D. poisoning



4.2 Selecting Desirable Traits

14. The process that selects and breeds individuals of a species to survive in a particular environment without human intervention is called ...
 - A. artificial selection
 - B. natural selection
 - C. survival of the strongest
 - D. inter-species genetics

15. When humans intervene in the reproduction of specific individuals of a species by selecting and breeding specific desirable characteristics the process is called ...
 - A. artificial selection
 - B. natural selection
 - C. survival of the strongest
 - D. inter-species genetics

16. The original wild species bred by Native peoples to produce corn came from a species of grass known as ...
 - A. canola
 - B. maize
 - C. teosinte
 - D. creole

17. Biotechnology is the process of selecting specific traits and enabling those traits to develop in future generations. There are many different biotechnologies that have worked successfully thus far. The technology, which uses a single cell of an organism to reproduce an identical organism in the laboratory, is called ...
 - A. cloning
 - B. insemination
 - C. in vitro fertilization
 - D. genetic engineering

18. Another biotechnology involves inserting a gene from one organism into the cell of another organism. An example of this is the production of life-saving medicines, such as insulin, by using bacteria to produce it. This technology is called ...
 - A. cloning
 - B. insemination
 - C. in vitro fertilization
 - D. genetic engineering

19. A specific side effect (drawback) in using these types of reproductive technologies is the decrease in genetic variation that is occurring. There are other risks associated with cloning and genetic engineering. Some researchers have speculated that the reason there are so many abnormalities in the resulting offspring is because the ...
 - A. technique is too delicate and mistakes have been made
 - B. removal of the nucleus from the donor egg is to blame
 - C. reproductive technologies are not proven yet
 - D. abnormal characteristics are hidden within donor eggs

20. Rice normally does not contain a particular vitamin. Researchers have genetically engineered a strain of rice that contains this vitamin – which is ...
 - A. Vitamin A
 - B. Vitamin B₁₂
 - C. Vitamin C
 - D. Vitamin E



4.3 Reducing Our Impact on Biological Diversity

21. International recognition of biological diversity was achieved at the Earth Summit in Rio de Janeiro in 1992. **The United Nations Convention on Biological Diversity** outlined the importance of preserving diversity on a global scale. This document is a ...
 - A. law
 - B. treaty
 - C. arrangement
 - D. proclamation

22. Conservation of biological diversity around the world requires the elimination or reduction of adverse impacts to biological diversity resulting from human activity. **The Canadian Biodiversity Strategy** focus on ...
 - A. ex-situ and out-situ management
 - B. in-situ and out-situ conservation
 - C. in-situ and ex-situ conservation
 - D. ex-situ and insitu management

23. Canada's first protected **National Park** area was established in 1885. It is ...
 - A. Glacier National Park
 - B. Yoho National Park
 - C. Banff National Park
 - D. Jasper National Park

24. The maintenance of populations of wild organisms in their own functioning ecosystems, allowing for the ecological processes of an area to continue undisturbed is called ...
 - A. in-situ conservation
 - B. ex-situ conservation
 - C. sustainability
 - D. resource partitioning

25. **The Nature Conservancy of Canada** acquires land or raises money to ensure the continued protection of natural area, by working with local conservation groups, private citizens and corporations. [The Nature Conservancy of Canada](#) - dedicated to preserving ecologically significant areas is a ...
 - A. provincial association
 - B. government agency
 - C. municipal committee
 - D. not-for-profit charity

26. Wetland areas, where habitat - nesting areas - is vital to the continued diversity of organisms living in these areas is supported by this group who promote through their **CARE** program, the restoration or improvement of available cover in wetland areas ...
 - A. Ducks Unlimited
 - B. Trout Unlimited Canada
 - C. The Green Team
 - D. Alberta Fish & Game Association

27. **"Purge the Spurge"** refers to a volunteer activity that occurs every year in July at [Fish Creek Park](#). Volunteers gather to pull a non-native noxious weed that threatens to take over the park and destroy wildlife habitat. The weed is called ...
 - A. thistle purge
 - B. leafy spurge
 - C. weedy purge
 - D. thorny spurge



28. The goal of this document was to ... “prevent species in Canada from becoming extinct as a consequence of human activity”. The document is ...
- A. The Biodiversity Protection Accord
 - B. The National Accord for the Protection of Species At Risk
 - C. The Alberta Wildlife Protection Accord
 - D. The Canadian Endangered Species Protection Accord
29. The identification of **species-at-risk** in Canada is made by ...
- A. WWE
 - B. WWF
 - C. ESCC
 - D. COSEWIC
30. Controlling the spread of an **invasive species** that takes over a wetland area, by reproducing very quickly and becoming the most prominent species in this ecosystem, (because it has no natural enemies) is done by using volunteers to pull it by hand, or using another exotic species, the weevil, that feeds on it to be introduced. The invasive species is the ...
- A. purple loosestrife
 - B. Canada thistle
 - C. ragweed
 - D. creeping bellflower
31. Conservation practices also include collections of specific species to maintain the genetic material necessary for reproducing the species in the future, should it be necessary. This collection of genetic materials is known as ...
- A. in-situ conservation
 - B. ex-situ conservation
 - C. sustainability
 - D. resource partitioning
32. The conservation of genetic material began with seed banks, between farmers. It has grown to world wide preservation banks of genetic material that is administered by a group of scientists known as the ...
- A. Biodiversity Conservation Genetic Bank
 - B. International Seed Bank Conservation Group
 - C. International Plant Genetics Resources Institute
 - D. World Seed and Genetic Material Institute of Conservation