

Tarleton State University
Invitational 2019
Environmental & Natural Resources CDE

1. Indicator species are (Burton p. 93)
 - A. Organisms that indicate the energy level on a food pyramid
 - B. Organisms that are representative of other species in a family
 - C. Organisms that show sensitivity to pollution before other organisms do
 - D. Organisms that represent other organisms in a particular habitat

2. Terracing, planting crops in strips on the contour, and keeping the land covered with vegetation are good practices to reduce what? (Burton p. 135)
 - A. leaching
 - B. weathering
 - C. mineralization
 - D. erosion

3. The responsible management or care of the land and its resources is... (Burton 261)
 - A. sustainability
 - B. stewardship
 - C. preservation
 - D. cohabitation

4. Which of the following tree harvesting methods is most likely to increase the risk of erosion? (Burton 159)
 - A. Seed tree method
 - B. Shelterwood method
 - C. Clear-cutting
 - D. Selection cutting

5. Characteristics of grazing practices that conserve natural resources include
 - A. Rotating animals among various pastures so that land can rest and regrow
 - B. Providing animals with unlimited access to water from streams and rivers
 - C. Open range grazing
 - D. Stocking rates greater than 1 AEU (animal equivalent unit) per acre

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6. Which of the following is the primary reason why new wetlands are constructed? (Burton 208)
- A. To drain swamps
 - B. To enhance agricultural production
 - C. To treat nonpoint source water pollution
 - D. To reduce the build-up of greenhouse gases in the atmosphere
7. Which of the following is a correct list of characteristics of sustainable agriculture? (Burton p. 260)
- A. Environmental Stewardship, Social Equity, Short-term profitability
 - B. Uses no chemical fertilizers or pesticides, relies on horses for plowing
 - C. Low productivity, involves a high level of hand labor, suited only for small acreage farms
 - D. Supports policies that protect the rights of farm workers, involves environmental health, is economically profitable
8. The US government agency that is responsible for enforcing laws to reduce air and water pollution from agriculture, land development, factories, and mining is called (Burton 164)
- A. Fish and Wildlife Agency
 - B. Environmental Protection Agency (EPA)
 - C. United States Department of Agriculture (USDA)
 - D. Natural Resources Conservation Service (NRCS)
9. Which of the following is NOT a result of fires burning through prairies (Burton 188)
- A. The carrying capacity for herbivores often increases
 - B. Grasses return from their roots; some tree seeds are stimulated to germinate
 - C. Wastelands and shrublands are created and grasslands are eliminated
 - D. Nutrients are recycled
10. Which is NOT a common control method for water-driven erosion? (Camp 70-77)
- A. contour farming
 - B. conservation tillage
 - C. shelterbelt
 - D. grassed waterways

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11. The order of strata or layers of vegetation in a forest from the ground up are:
(Burton 167)
- A. Decomposition layer, shrub layer, canopy, herb layer
 - B. Forest floor, herb layer, shrub layer, canopy
 - C. Decomposition layer, herb layer, understory layer, shrub layer
 - D. Forest floor, canopy, herb layer, shrub layer
12. The single greatest cause of extinction is (Burton p 237)
- A. Destruction or modification of habitat
 - B. Poaching animals
 - C. Genetic modification
 - D. Global warming
13. Sheet, rill, and gully erosion are caused by (Camp 62)
- A. plowing
 - B. water
 - C. clear cutting of trees
 - D. wind
14. A lotic habitat in a freshwater biome is one in which... (Burton 304)
- A. water stands still for long periods of time
 - B. deeper water is colder than surface water
 - C. plant growth is easily supported
 - D. water flows freely
15. A measurement of the total concentration of dissolved ions in water is... (Burton 95)
- A. salinity
 - B. pH
 - C. turbidity
 - D. solubility
16. Rachel Carson's Silent Spring is a warning against... (Burton 269)
- A. deforestation
 - B. groundwater pollution
 - C. use of pesticides
 - D. overharvesting vegetation

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17. Which of the world's biomes is known for having frequent fires? (Burton 312-313)
- A. coniferous forest
 - B. tundra
 - C. tropical rainforest
 - D. grassland
18. Interaction between members of the same species is known as... (Burton 230-231)
- A. Mutualism
 - B. intraspecific
 - C. commensalism
 - D. interspecific
19. The economic theory that individuals sharing communal property will deplete its resources due to short term planning and self-interest is... (Camp 477-478)
- A. Tragedy of the Commons
 - B. Supply and Demand
 - C. Survival of the short-sighted
 - D. Overgrazing
20. Regarding population dynamics, doubling and halving populations indicate what type of growth? (Burton 293-296) (Camp 35-36)
- A. no growth
 - B. exponential growth
 - C. linear growth
 - D. logistic growth
21. What are the three points of the fire triangle? (Camp 281)
- A. fuel, light, heat
 - B. water, wind, heat
 - C. Oxygen, heat, fuel
 - D. ignition temperature, fuel, heat

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22. The five categories: minerals and rocks, glacial deposits, loess deposits, alluvial and marine deposits, and organic deposits; refer to what? (Burton p. 115)
- A. soil layers
 - B. soil weathering factors
 - C. soil humus
 - D. soil parent material
23. Alluvial deposits of soil are found near where there is, or where there once was, a (Camp 42)
- A. glacier
 - B. river
 - C. forest
 - D. prairie
24. The relationship between two organisms is referred to as mutualism when (Burton p 230)
- A. Two organisms live together or interact for the benefit of both
 - B. One organism feeds on another organism
 - C. Two organisms live together, and one benefits while the other is neither benefited or harmed
 - D. Two organisms interact, and one benefits while the other is harmed
25. Which of the following is NOT a gas involved in global warming (p 71 Burton)
- A. Methane
 - B. Nitrous Oxide
 - C. Nitrogen gas
 - D. Carbon Dioxide
26. What is an environmental impact of mining? (Camp 86-87)
- A. there is no impact
 - B. political disputes over land rights
 - C. high financial cost of material being mined
 - D. high risk of substantial erosion

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27. An example of bioremediation is... (Burton 236)
- A. Insects pollinating flowers
 - B. Bacteria breaking down hydrocarbons in oil spills
 - C. Sustainable agriculture
 - D. Birds using dead trees for nesting sites
28. What organism(s) tends to reflect the approximate health of an environment? (Burton 93)
- A. Indicator species
 - B. decomposer
 - C. consumer
 - D. producer
29. What is NOT an example of industrial solid waste? (Burton 320-322)
- A. plastic
 - B. paper
 - C. shredded bark
 - D. metal scraps
30. What is the alternative energy source that utilizes plant material and animal waste to produce a renewable source of energy? (Camp 431)
- A. sustainable agriculture
 - B. biomass
 - C. biome
 - D. tidal energy
31. As acquired energy flows up the trophic levels it... (Burton 31-33) (Camp 33-34)
- A. decreases
 - B. fluctuates
 - C. increases
 - D. remains constant
32. Product created by organic matter trapped in the earth for long periods of time... (Camp 414)
- A. groundwater
 - B. renewable resources
 - C. nonrenewable resources
 - D. pollution

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33. Global warming caused by the greenhouse effect is due to... (Burton 67-71)
- A. Degradation of the ozone layer
 - B. Radiation from the sun trapped at earth's surface
 - C. A buildup of trapped gases emitted by humans
 - D. All the above
34. In the water cycle, water is returned to the atmosphere through (Burton p.88)
- A. Transpiration
 - B. Infiltration
 - C. Precipitation
 - D. Condensation
35. Which of the following process produces water and carbon dioxide? (Burton 22)
- A. Photosynthesis
 - B. Transpiration
 - C. Condensation
 - D. Respiration
36. What is a common method of desalination that would render oceanic water drinkable? (Camp 197-200)
- A. Evaporation
 - B. Distillation
 - C. Condensation
 - D. Precipitation
37. Which of the following is a primary factor affecting the amount of space needed by an animal? (Burton p 225)
- A. The lifespan of an animal
 - B. The type of biome
 - C. Size of the animal
 - D. Feeding habits of the animal
38. Which of the following is an inexhaustible resource? (Camp p 27)
- A. Drinking water
 - B. Soil
 - C. Forests
 - D. Air

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39. What type of soil has a relatively even mixture of sand, silt and clay? Pg. 120
ESFA
A. Loess
B. Loam
C. Gley
D. Mud
40. Which of the following is the primary role of shelter/cover to wildlife habitats?
(Burton p 224)
A. Drinking water
B. Reproduction
C. Escape/concealment from predators
D. Training young to hunt for prey
41. Correct management of our mineral resources is very important primarily
because...pg.
A. They react with water
B. They are all toxic to touch
C. They are in overabundance in the world
D. They are nonrenewable resources
42. Which of the following characteristics is NOT a characteristic of a jurisdictional
wetland as defined by the U.S. Army Corps of Engineers (Burton 197)
A. Occur only in floodplains
B. Coverage by hydrophytic plants
C. Frequent flooding or saturation
D. Includes hydric soils
43. The man-made disaster caused by severe misuse of agricultural land in the 1930s
is known as... (Camp 61-62)
A. Global warming
B. Dust bowl
C. Overgrazing
D. Erosion

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44. A learned behavior that improves the chances for a wild animal to survive is also known as (Burton p. 246)
- A. Adaptive behavior
 - B. Manipulative behavior
 - C. Instinctive behavior
 - D. Inherited behavior
45. Some examples of nonrenewable resources are... (Camp 414-425) (Burton 45-46)
- A. Oil, sun, wind
 - B. Wildlife, metals, oil
 - C. Minerals, soil, natural gas
 - D. Oil, fossil fuels, timber
46. Which macroinvertebrate's presence is commonly indicative of highly polluted water? (Camp 178-179)
- A. Gilled snails
 - B. Crayfish
 - C. Leech
 - D. Stonefly
47. The method of resource control in which no regulation practices are to be administered... (Burton 14-15)
- A. Population control
 - B. Preservation
 - C. Sustainability
 - D. Conservation
48. What is a common cause of desertification? (Burton 50-51) (Camp 59-60)
- A. Climate change raising Earth's temperatures
 - B. Decline in the volume of the oceans
 - C. Deforestation leading to an arid climate and water runoff
 - D. Use of nonrenewable resources

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49. What are the three factors that determine the severity of a plant disease? (Burton p 275)
- A. Plant nutrient status, genetic engineering, rainfall
 - B. Temperature, the diversity of plants in a field, the number of bacteria in the soil
 - C. The presence of disease organisms, plant nutrient status, plant growth rate
 - D. Presence of a disease-causing organism, plant susceptibility to a disease, environmental conditions favorable to disease infestation
50. Which of the following describes four components of integrated pest control? (Burton p. 268)
- A. Fire control, plowing method, fertilization practices, choice of crops
 - B. Genetic resistance, chemical control, mechanical control, biological control
 - C. Planting time, planting method, fertilization practices, harvest methods
 - D. Use of chemical fertilizers, genetic engineering, time of planting, crop rotations