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**2012 National FFA
Environmental & Natural Resources CDE
Exam Key**

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1. What is a natural resource?
 - a. **anything that was not produced by humans and that it useful in our lives**
 - b. any living factor in our environment that is useful in our lives
 - c. any non living factor in our environment that is useful in our lives
 - d. any product produced that is useful in our lives

2. Which of the following statements about water is **true...**
 - a. **the greatest consumer of freshwater in the world is agricultural**
 - b. the greatest consumer of freshwater in the world is industrial
 - c. the greatest consumer of freshwater in the world is residential
 - d. the world has enough available freshwater just not in the areas that it is needed

3. Renewable resources are.....
 - a. any material that provides energy.
 - b. irreplaceable.
 - c. **replaceable.**
 - d. not natural resources.

4. What is a biotic factor?
 - a. **anything that is part of the living parts of an ecosystem**
 - b. any non living factor in our environment that is useful in our lives
 - c. anything that is produced that is useful in our lives
 - d. living things organized into various levels

5. Which of the following is a property of soil that affects how land can be used?
 - a. length
 - b. shape
 - c. **texture**
 - d. wetness

6. What is point source pollution?
 - a. a source of pollution that can not be traced to one source
 - b. **a source of pollution that can be traced to one source**
 - c. a source of pollution that degrades water quality
 - d. a source of man made pollution

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7. Which of the following is the best description of an ecosystem?
 - a. **is all of the organisms living in an area together with their physical environment**
 - b. A group of organisms that are closely related and can mate to produce fertile offspring
 - c. Is all the members of the same species that live in the same place at the same time
 - d. any product produced that is useful in our lives

8. Which of the following statements about water is **not true**...
 - a. we have plenty of freshwater but not where people need it
 - b. we have plenty of water but not the usable quality needed
 - c. effective water management is the key
 - d. **we really have a critical freshwater shortage in this country**

9. Which of the following components of an ecosystem are not abiotic factors?
 - a. small rocks.
 - b. sunlight.
 - c. **tree branches.**
 - d. wind

10. What is the over accumulation of pollutants at successive levels of the food chain called?
 - a. biomagnifications
 - b. eutrophication
 - c. bio permeability
 - d. non point source pollution

11. Which of the following is not an example of point source pollution?
 - a. oil that is escaping from a damaged tanker
 - b. heavy metals that are leaching out of an underground mine
 - c. **water runoff from residential lawns**
 - d. untreated sewage that is accidentally released from a wastewater treatment plant.

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12. Thermal pollution has a harmful effect on aquatic environments because
- a. it decreases the nutrient levels in aquatic environments
 - b. it reduces the amount of dissolved oxygen in aquatic environments**
 - c. it increases the number of disease-causing organisms in aquatic environments
 - d. water has been circulated around power plant generators.
13. Which of the following processes is not a part of the water cycle.?
- a. biomagnifications**
 - b. condensation
 - c. evaporation
 - d. precipitation
14. Which pollution is easier to control?
- a. eutrophication
 - b. non-point source pollution
 - c. oil spills
 - d. point source pollution**
15. Which of the following pollutants causes artificial eutrophication?
- a. heavy metals from unlined landfills
 - b. inorganic plant nutrients from wastewater and fertilizer run off**
 - c. radioactive waste from nuclear power plants
 - d. toxic chemicals from factories
16. The majority of sulfur dioxide produced by industry comes from
- a. chemical plants
 - b. coal-burning power plants**
 - c. dry cleaners
 - d. oil refineries

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17. Acid precipitation is formed when
- polluted runoff collects and evaporates into precipitation
 - when fossil fuels are burned and they release oxides into the air and combine with water**
 - global warming increases the concentration of acids in precipitation
 - the acids from battery plants are released into the environment
18. The thin layer at Earth's surface where life exists is called the
- atmosphere
 - biosphere**
 - hydrosphere
 - geosphere
19. The ozone layer is located in the
- mesosphere
 - stratosphere**
 - thermosphere
 - troposphere
20. Liquid water turns into gaseous water vapor in a process called
- convection
 - condensation
 - evaporation**
 - precipitation
21. If a person was studying the complex relationships among living things and their environment he/she would be studying.....
- botany.
 - zoology.
 - ecology.**
 - world history.
22. Which of the following is a renewable natural resource?
- minerals
 - fuel
 - copper
 - fish and wildlife**

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23. Which of the following is a nonrenewable natural resource?
- a. forest
 - b. fish and wildlife
 - c. fuel**
 - d. soil
24. The three components of the food chain are...
- a. earth, wind and fire.
 - b. producers, consumers, and decomposers.**
 - c. soil, plants, and animals.
 - d. dogs, cats, and horses.
25. The primary source of food energy in a food chain comes from...
- a. consumers
 - b. decomposers
 - c. producers**
 - d. water
26. A food web is different from a food chain because.....
- a. animals eat plants in a food web and they do not in a food chain.
 - b. a food web is a combination of several food chains.**
 - c. a food web and a food chain are the same thing
 - d. decomposers eat animals in a food chain but not in a food web.
27. Where is the majority of the earth's water?
- a. in the oceans and polar ice caps**
 - b. in plants and animals
 - c. precipitating at this moment
 - d. water vapor in the atmosphere
28. Carbon is returned to the atmosphere through
- a. carbon is completely used and never returns to the environment
 - b. the burning of fossil fuels
 - c. the water cycle
 - d. respiration of producers, consumers, and decomposers**

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29. Nitrates are.....
- a. common gases found in the atmosphere.
 - b. formed from the decomposing of dead organisms and animal wastes**
 - c. man-made fertilizers utilized in the production of the food we eat.
 - d. not useful to plants until converted to nitrites..
30. How are ecosystems and biotic communities different?
- a. Ecosystems and communities are the same thing.
 - b. A biotic community is a system of only living organisms, but an ecosystem is a system of living and nonliving factors.**
 - c. They are both subject to alterations by humans.
 - d. A biotic community is a system of living and nonliving factors, but an ecosystem is a system of only living organisms.
31. Which of the following is usually the most limiting factor to life in an ecosystem?
- a. clean air
 - b. soil
 - c. solar energy
 - d. water**
32. Which of the following are lead contributors to water contaminants?
- a. car exhausts
 - b. cattle and hog wastes
 - c. nitrates and pesticides**
 - d. sewage and waste
33. IPM (Integrated Pest Management) does not utilize the following practices...
- a. a rotation of crops to kill specific pests
 - b. scouting of pests to determine the type of pest and extent of damage
 - c. the use of biological organisms to combat harmful pests
 - d. the use of chemicals to kill pests as frequently as possible

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34. What is the leading cause of eutrophication?
- accumulation of salts in irrigated lands
 - fertilizer runoff
 - use of heavy metals in soils
 - wind erosion
35. Which of the following is not an agricultural practice that does not lead to improved water quality?
- IPM (Integrated Pest Management)
 - no-till crop production
 - use of ethanol**
 - wetland and riparian area management
36. Abiotic factors influencing ecosystems include.....
- food chains and the loss of heat at each step.
 - producers, consumers, and decomposers.
 - the living parts of an ecosystem.
 - water, soil, air, climate, and space.**
37. The predictable and gradual change from one community with the passage of time is called.....
- community change.
 - ecological change.
 - ecosystem drift.
 - ecological succession.**
38. Consumers.....
- are the beginning of any food chain..
 - cannot make their own food**
 - manufacture their own food by participating in food chains/webs.
 - outnumber the producers in the world.
39. Which is not a plant adaptation to abiotic factors in grasslands?
- narrow, vertically arranged leaves
 - most of biomass of plant underground
 - production of above and below ground lateral shoots
 - thick, woody stems**

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40. Which are not good crop and management techniques?
- a. integrated pest management
 - b. no-till
 - c. propagation of the same crop year to year**
 - d. reducing use of chemical fertilizers if profitable
41. Highly degraded soil organic matter is/are known as.....
- a. humus**
 - b. microbial soil
 - c. pedogenesis
 - d. soil beginnings
42. What percentage of the average soil is organic matter?
- a. 5 %**
 - b. 17 %
 - c. 25 %
 - d. 45 %
43. Before the ingredients of soil are broken down and form soil they are known as.....
- a. felsic mix
 - b. organic minerals
 - c. parent material**
 - d. presoil mix
44. Soil organic matter is measured in which of the following units?
- a. inches
 - b. ounces
 - c. percentages**
 - d. pounds
45. Which of the following factors affects soil formation?
- a. color
 - b. climate**
 - c. traffic intensity
 - d. uses

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46. Which of the following chemical elements is not needed to form an organic chemical?
- a. carbon
 - b. chlorine**
 - c. hydrogen
 - d. oxygen
47. One of the first synthetic insecticides was derived from a naturally occurring chemical found in _____.
- a. black nightshade
 - b. fescue grass
 - c. rhubarb
 - d. tobacco**
48. The fatal botulin toxin can be found where?
- a. in the air
 - b. in the rainforest
 - c. in the soil**
 - d. in the water
49. The botulin toxin is produced by a _____.
- a. bacteria**
 - b. fungi
 - c. mold
 - d. virus
50. Which of the following plants does not contain a toxic chemical which is fatal to livestock?
- a. black nightshade
 - b. black cherry tree
 - c. blue grass**
 - d. fescue grass
51. Soap and water can be used to kill insects in the _____ stage.
- a. adult
 - b. egg
 - c. larvae**
 - d. pupae

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52. The signal word “danger” on a pesticide label indicates...
- a. **high toxicity**
 - b. low toxicity
 - c. moderate toxicity
 - d. no toxicity
53. Of the following which is not found on a chemical label?
- a. directions
 - b. ingredients
 - c. precautions
 - d. **safety tests**