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*Student Name**Class***Section 1 – Plant structures and Life Processes**

1. The largest group of plants in the world is seed plants. The structure in seed plants that function to produce food for the plant is the ...
  - A. **flower**
  - B. **stem**
  - C. **seed**
  - D. **leaf**
  
2. The structure in seed plants that supports the other parts of plant is the ...
  - A. **root**
  - B. **stem**
  - C. **seed**
  - D. **leaf**
  
3. The function of the root is to ...
  - A. **absorb water**
  - B. **support**
  - C. **produce food**
  - D. **reproduce**
  
4. Moving water up a plant from the roots to the leaves occurs by a combination of different processes. The main process that draws water up from the plant roots is ...
  - A. **osmosis**
  - B. **capillary action**
  - C. **diffusion**
  - D. **transpiration**
  
5. Water travels from the roots, up the stem to the leaves, through tiny tubes. The attraction of the water particles to each other is called ...
  - A. **partner attraction**
  - B. **capillary action**
  - C. **mutual attraction**
  - D. **'sticky' action**
  
6. Osmosis is the diffusion of water particles when there is a difference in concentration. When the concentration of water in the soil is greater than the concentration of water in the roots of the plant, the water particles will move to the ...
  - A. **stem tissue**
  - B. **leaf cells**
  - C. **root hairs**
  - D. **stem tubes**
  
7. A process that does not require a difference in substance concentration is called ...
  - A. **diffusion**
  - B. **osmosis**
  - C. **pore selection**
  - D. **active transport**
  
8. The beginning and end of a seed plant are selected actions that take place. The beginning of a seed plant is when a seed begins to grow into a plant. The end of the process is when a seed plant ...
  - A. **wilts and dies**
  - B. **grows reproductive organs**
  - C. **produces seeds of its own**
  - D. **gets harvested and sold**

9. Usually found in the very center of the flower, the female part of the flower is called the ...
- A. ovary
  - B. stoma
  - C. pollen
  - D. stigma
10. Plants can also reproduce without seeds. Stems can reproduce new plants. Stems that grow underground and reproduce without seeds are called ...
- A. runners
  - B. rhizomes
  - C. suckers
  - D. bulbs
11. To protect the thin needle-like leaves of white spruce trees from drying out, they are coated with a thick layer of ...
- A. wax
  - B. resin
  - C. rubber
  - D. pollen
12. One of the nutrients that plants need to grow healthy and develop properly is nitrogen. If plants do not get enough nitrogen, their leaves will ...
- A. turn yellow
  - B. wilt and die
  - C. curl and turn brown
  - D. lose too much water
13. Plants are grown in artificial environments and get all the nutrients they need without variations in growing conditions. This is possible in a ...
- A. garden
  - B. hydrofoil
  - C. shelterbelt
  - D. greenhouse

### Section 2 –Plants play an essential role in the environment

14. The four classification categories of vegetation (plant) cover in Canada include: forest, tundra, barren and this category ...
- A. field
  - B. meadow
  - C. agriculture
  - D. gardening
15. Plants prevent the process that moves soil from place to place, because their roots hold the soil in place. This process is ...
- A. erosion
  - B. respiration
  - C. weathering
  - D. protection
16. All organisms are connected within an ecosystem. Plants are the most important because they make their own food and they are the ...
- A. carnivores
  - B. herbivores
  - C. consumers
  - D. producers
17. Paintbrush is a red flowering plant that grows throughout Alberta. The Aboriginal people used this plant to treat rheumatism and its flowers could be eaten as a ...
- A. pain killer
  - B. sweet treat
  - C. headache relief
  - D. antacid

18. A plant used by the Metis, First Nations and Inuit people to treat kidney problems was called '*kinnikinick*'. It comes from this plant ...
- A. buffalo berry
  - B. willow bark
  - C. opium seed pod
  - D. white spruce
19. Plants are also used for fuel. Using plants for fuel is not very efficient. The reason for this is because ...
- A. it costs too much to convert the plant to fuel
  - B. a large amount of energy is needed to grow the plant
  - C. a lot of the energy is unable to be used
  - D. It is not very economical to grow plants for fuel
20. Destruction of many of the native species, in the grassland regions of Alberta, was caused by ...
- A. grassland fires
  - B. lightning strikes
  - C. conversion to forests
  - D. conversion to cropland
21. Proper forestry practices can increase the diversity of species in the forest. This is possible because careful cutting can ...
- A. remove habitat
  - B. reduce excess light
  - C. increase light and air
  - D. Increase species numbers
22. Foresters, who harvest forests for the many products they provide, must follow certain regulations in order to keep this resource healthy and renewable. These regulations are established by people who ...
- A. employ logging companies
  - B. manage forest resources
  - C. study harvesting effects
  - D. live in the forest ecoregion

### Section 3 – Soil is an important resource that human activity can protect or degrade

23. Soil is a natural resource. The components of soil include organic matter and minerals. When soil contains partly decayed organic matter it is called ...
- A. clay
  - B. sand
  - C. humus
  - D. vegetative
24. This type of soil has mostly minerals and does not retain moisture very well ...
- A. clay
  - B. sand
  - C. loam
  - D. sediment
25. Good healthy soil contains soil-dwellers and decomposers. The four main types of decomposers are ...
- A. bacteria, fungi, earthworms, actinomytes
  - B. crows, raccoons, hyenas, wolverines
  - C. earthworms, centipedes, bacteria, ants
  - D. magpies, crows, raccoons, mice
26. When earthworms are moving through the soil they eat it, grind it, digest it and mix it. Their mucus helps stick the particles together and their tunnels provide ...
- A. protection
  - B. minerals
  - C. moisture
  - D. air

27. Farmers need to make money when growing crops. Most farmers only grow one type of crop in a particular area. This type of farming is called ...
- A. **shelterbelts**
  - B. **mini-cropping**
  - C. **monoculture**
  - D. **single-cropping**
28. The practice of planting a particular type of crop in a field every year, to match the nutrients the soil has for this particular type of crop is called ...
- A. **monoculture**
  - B. **crop rotation**
  - C. **summer fallow**
  - D. **zero tillage**
29. Many farming practices are used to save the soil from excess erosion. Planting trees or shrubs along the edges of field is one such practice. The purpose behind this is to ...
- A. **provide travel corridors for water**
  - B. **enhance crop rotation**
  - C. **plant the seeds through the stubble**
  - D. **reduce wind damage and trap snow**

#### Section 4 – The ways that plants are grown are related to needs, technology and the environment

30. An artificial plant environment is one in which all of the growing conditions can be controlled. The following is an example of an artificial environment ...
- A. **hydrofoil**
  - B. **hydrogenerate**
  - C. **hydroponic**
  - D. **hydrolysis**
31. Spreading manure over cropland is a technique growers use to improve the yield of different crops. This action adds this nutrient to the soil ...
- A. **salt**
  - B. **calcium**
  - C. **vegetation**
  - D. **organic matter**
32. A group of organisms that all have similar traits and who's offspring can reproduce are called a ...
- A. **subgroup**
  - B. **species**
  - C. **selection**
  - D. **variety**
33. A very small section of a plant cell's nucleus is called a ...
- A. **trait**
  - B. **variety**
  - C. **gene**
  - D. **hybrid**
34. The process which combines genetic material from one organism into another organism, to make a new organism is called genetic ...
- A. **diversity**
  - B. **addition**
  - C. **engineering**
  - D. **recreation**
35. Canola is an oilseed crop that is valued for its ...
- A. **taste and colour**
  - B. **durability**
  - C. **resistance to predators**
  - D. **health benefits**

36. The breeding of super weeds may be happening with the Canola crop. This is suspected, because scientists believe the canola plant is cross-pollinating with ...
- A. **wild oats**
  - B. **wild mustard**
  - C. **rapeseed**
  - D. **barley**
37. Dandelions are super weeds because they had no natural controls when they were introduced to North America from Europe. They were brought here to be used as a ...
- A. **flowering plant**
  - B. **salad vegetable**
  - C. **medicinal plant**
  - D. **edible wildflower**
38. The use of pesticides can cause a problem. They build up over time in the food chain and get stored in organisms, just as food energy is stored. This process is called...
- A. **ecoaccumulation**
  - B. **bioaccumulation**
  - C. **pesticide residue**
  - D. **chemical pollution**
39. Organic food is food that has been grown without the use of chemical fertilizers and chemical pesticides. To provide the needed nutrients to grow the plants, they use ...
- A. **manure and compost**
  - B. **tillage and crop rotation**
  - C. **mulching and companion planting**
  - D. **clean equipment and good seeds**
40. Chemicals that are used as pesticides can wash off many plants and become poisonous in the soil. This is referred to as soil ...
- A. **resistance**
  - B. **restriction**
  - C. **regeneration**
  - D. **residue**
41. When we don't investigate all of the possible factors and outcomes for our actions in the environment, these might occur ...
- A. **bio-diversification**
  - B. **bio-accumulation**
  - C. **natural consequences**
  - D. **unintended consequences**
42. Balancing the needs of humans and the needs of the environment is called 'Environmental ...
- A. **Practice**
  - B. **Diversification**
  - C. **Management**
  - D. **Control**
43. One of the effects of monoculture farming practices is that pests feeding on that crop have a large food supply. Monoculture is also a farming practice that actually lowers ...
- A. **cost of pesticides**
  - B. **biodiversity**
  - C. **crop yield**
  - D. **natural predators**
44. Forestry practice can disrupt some predator-prey relationships. Logging roads actually help predators find their prey, because the prey ...
- A. **are much slower**
  - B. **cannot be seen as well**
  - C. **have nowhere to hide**
  - D. **don't worry about predators**