**ASSIGNMENT  
  
 CLASS: 9th  
  
 SUBJECT: BIOLOGY**

**SESSION :2019-2020**

**UNIT -2**

**TOPIC: TISSUES**

**Qno1. What is a tissue?**

Ans: A group of cells having a common origin and performing similar functions is called tissue. In other words, we can say that tissue is a cluster of cells which performs a specialized function.

**Qno2. What is the utility of tissues in multi - cellular organisms?**

Ans: Multi - cellular organisms are made up of millions of cells. These organisms show division of labour. Large groups of these cells are specialized to perform specialized functions. So, a particular function is carried out by a cluster of cells at a definite place in the body. The tissues are formed by these specialized cells and therefore perform with highest efficiency.

**Qno3 .Name types of simple plant tissues.**

Ans: The simple plant tissues are:-

* Parenchyma b.collenchyma c.sclerenchyma.

**Qno4 .Where is apical meristem found?**

Ans: Apical meristem is found at the growing tips of stem and roots and helps increasing length of the stem and the roots.

**Qno5. Which tissue makes up the husks of coconut?**

Ans: The sclerenchymatous tissue makes up the husk of coconut.

**Qno6. What are the constituents of phloem?**

Ans: The constituents of phloem are

* sieve tubes( living cells)
* companion cells( living cells)
* phloem parenchyma (living cell)
* phloem fibres (non- living cells)

**Qno7. Name the tissue responsible for movement in our body?**

Ans: Muscular tissue is responsible for the movement in our body.

**Qno8. What does a neuron look like?**

Ans: A neuron is a long cell. It has a flat body which contains nucleus and cytoplasm. From the cell body many small fibres called dendrites and one long fibre called axon arises. Another terminal of axon ends in nerve endings.

**Qno9. Give three features of cardiac muscles?**

Ans: The three features of cardiac muscles are

* Cells are long with blunt ends. These cells are cylindrical and branched with one or two nuclei.
* Faint cross striations are present.
* These form involuntary muscles. As the function of the cardiac heart muscles is to contract and relax rhythmically, they perform the functions without fatigue throughout the life.

**Qno10. What are the functions of areolar tissue?**

Ans: The functions of areolar tissue are

* It helps in supporting and binding the skin with underlying tissues.
* It fills the space inside the organs
* It supports internal organs.
* It helps in repair of tissues.

**Qno11. How many types of elements together make up the xylem tissue? Name them.**

Ans: Four types of elements together make up the xylem tissue.

These are: - a.Tracheids b. vessels c. xylem parenchyma d. xylem sclerenchyma.

**Qno12. How are simple tissues different from complex tissues in plants?**

|  |  |
| --- | --- |
| **Simple tissues** | **Complex tissues.** |
| 1. These are made up of one type of cells.  2. The main function of these tissues are storage and mechanical support. These do not transport substance.  3. Example: parenchyma, collenchyma sclerenchyma. | 1. These are made up of more than one type of cells.  2. The main function of tissues is conduction of water, minerals (xylem) and food prepared  by leaves (phloem).They are therefore called as vascular tissues too.  3. Example: xylem, phloem. |

**Qno13. Differentiate between parenchyma, collenchyma and sclerenchyma on the basis of their cell wall.**

|  |  |  |
| --- | --- | --- |
| **PARENCHYMA** | **COLLENCHYMA** | **SCLERENCHYMA** |
| 1. Cells are thin walled and composed of cellulose, hemi cellulose or pectin.  2. These are loosely packed with intercellular spaces between them. | 1. Cells are thin walled but thickened at angles due to deposition of cellulose or pectin at corners.  2. Inter cellular spaces are either very little or absent. | 1. Cells are very thin walled due to the deposition of lignin. At some areas the walls are comparatively thin (pits).  2.Compactly packed  So, intercellular spaces are absent. |

**Qno14.What are the functions of the stomata?**

Ans: The functions of stomata are

* **Transpiration:** water from the leaves is lost from stomatal openings in the form of water vapour.
* **Exchange of gases:** The exchange of gases like oxygen and carbon dioxide takes place through stomata during photosynthesis and respiration.

**Qno15. What is the specific function of the cardiac muscles?**

Ans: The specific function of cardiac muscle is to contract and relax rhythmically (heart beat) throughout the life without any fatigue.

**Qno16. Differentiate between striated, un -striated and cardiac muscles on the basis of the structure and site/ location in the body.**

Ans: **STRUCTURE:-**

|  |  |  |
| --- | --- | --- |
| **STRAITED MUSCLES** | **UNSTRAITED MUSCLES** | **CARDIAC MUSCLES** |
| 1. Long, cylindrical and un branched cells with blunt ends.  2. Multi nucleated cells i.e., cells have many nuclei located at periphery.  3. The cells have alternate dark and light bands called striations.  4. Unbranched cells. | 1. Long cells with pointed ends.  2. Uni -nucleated cells.  3. No striations or stripes are present.  4. Unbranched cells. | 1. Long cells with blunt ends.  2. Cells have one or two nuclei in the Centre.  3. Faint striations are present.  4. Cells are branched. |
| **SITE/LOCATION**:  These are found in the limbs and are mostly attached to bones. | These are found mostly in the walls of blood vessels, alimentary canal, ureters and  Bronchi (lungs) etc. | These are found in the walls of heart exclusively. |

**Qno17. Name the following.**

* **Tissues that forms the inner lining of our mouth.**

Ans: Squamous epithelium.

* **Tissue that connects muscle to bone in humans.**

Ans: Tendon

* **Tissue that transports food in plants.**

Ans: Phloem

* **Tissue that stores fat in our body.**

Ans: Adipose tissue

* **Connective tissue with a fluid matrix.**

Ans: Blood

* **Tissue present in the brain.**

Ans: Nervous tissue.

**Qno18. Identify the type of tissue in the following skin, bark of tree, bone, lining of kidney tubule, vascular bundle.**

Ans: **a. SKIN:** Striated squamous epithelium.

**b. BARK OF TREE**: Cork (epidermal tissue), the outer protective tissue with dead cells thickened due to deposition of suberin.

**c. BONE:** Connective tissue.

**d. LINING OF KIDNEY TUBULE**: Cuboidal epithelium

**e. VASCULAR BUNDLE:** Conducting tissue--- xylem and phloem.

**Qno19.Name the region in which parenchyma tissue is present.**

Ans: Parenchyma is basically packing tissue and is found everywhere in plants like in pith and cortex or root, stem. Parenchyma which contains chlorophyll (chlorenchyma) is found in leaves and parenchyma which has air cavities (aerenchyma) is found in aquatic plants.

**Qno20. What is the role of epidermis in plants?**

Ans: It protects internal tissue against mechanical injury, parasitic fungi, bacteria and from also cold or heat. Thick cutical, wax, epidermal hair and multiple epidermis reduce loss of water from internal tissue. Epidermal cells of roots have hairs that greatly increase the absorption of surface areas for the absorption of water and nutrients.

**Qno21. How does the cork act as a protective tissue?**

Ans: The walls of cork cells are heavily thickened by the deposition of suberin. This structural characteristic helps the cork to protect and prevent itself from infection and mechanical injury. It also prevents desiccation, by preventing the loss of water from the plant body.

**Qno23:-Diagrammatically show the difference between the three types of muscles fibre?**

Ans: - Diagram on book.

**Qno24:-Draw a labelled diagram of a newron?**

Ans:-Diagram on book.