

Salahaddin University-Erbil

College of Education

Department of Biology

Theoretical plant anatomy- Second semester

Question Bank

Q/ Name each of the following structures or tissues:

- 1- Initials meristems give rise to the adaxial and abaxial epidermis of the leaf.
- 2- At the end of the growing season the sieve plate is covered by a polysaccharides structure which is accumulate rapidly plugging the sieve pores when the plant subjected to a stress.
- 3- Part of the pith region that surrounds the vascular bundles and are involved in the conduction of food and water between the bundles.
- 4- Overgrowths of the protoplast of adjacent living parenchyma cells which enter the lumen of the vessels of the heartwood (secondary xylem) through the pit cavities and blocked it.
- 5- It is the extended of the Funicle up to the base of the ovule and the ridge.

Q/ Write the steps of the Secondary Growth in the Dicotyledon Root.

Q / Write the differences between Monocot and Dicot leaf.

Q/- Define the types of layers that surrounded the pollen sac.

Q/- Draw the steps of the division in the Ovule.

Q/ Compare between the Cortex layer in Monocot and Dicot Stem.

Q/ Fill the blanks with suitable scientific terms;

1-The ----- are overgrowths formed in xylem vessels of plants that enter the lumen of the vessel through the -----during the invasion of pathogens.

2- In the stem of dicot plants, the ----- tissue together with the pericycle give rise to the -----during secondary growth.

3- In the type of ----- vascular bundle, the phloem tissue present in the center is surrounded by the xylem tissue on -----.

4- The Hydathodes release water with some substances from the leaf's interior to its -----, this process is called -----, and structurally these pores consist of a -----that is continuous with the epidermis layer.

5- The Primary Phloem formed from ----- and as a result of primary growth, the ----- and ----- are formed.

6- The ----- cells present in the Endoderm layer of the root. These cells regulate the flow of fluid between the ----- and the -----.

7- The Latex vessel is scattered throughout the ----- of the plant and consists of a ----- cell.

8- The ----- and ----- are types of Xylem fibers that provide mechanical strength to the plant body.

Q// Underline the wrong words then correct them:

1-The Apical Meristem is a region in the root apex where cell division is very slow or not at all.

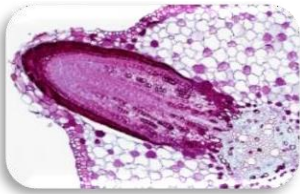
2-The extra-floral nectary are associated with the flowers. Usually found on the floral thalamus, base of gynoecium or androecium.

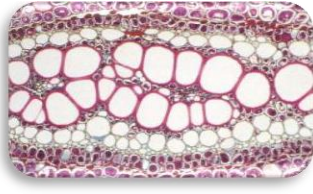
3- The medullary rays are part of the pith region that surrounds the endoderm layer and are involved in the conduction of food and water.

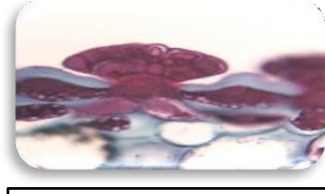
4- The sieve cells are present in seedless vascular plants and they are more specialized compared to sieve tubes.

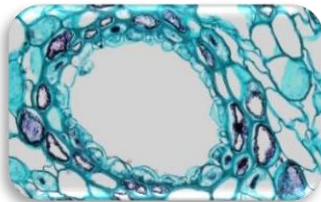
5- The Endarch is present in the root where the protoxylem is towards the pith and the metaxylem is towards the periphery.

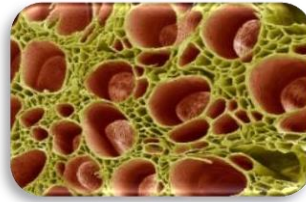
Q/ identify the following figures











Q/Compare between the following plant parts:

Characteristics	Monocot Root	Dicot Root
Pericycle		
Cambium tissue		
Vascular bundles		
Secondary growth		
Characteristics	Monocot Stem	Dicot stem
Hypoderm layer		
Cortex layer		
Endodermis layer		

Q/ Compare between the leaves layer in monocot and dicot .

Q/ write the steps of egg cell formation in plant