

Chapter 6

TISSUES

Multiple Choice Questions

1. Which of the following tissues has dead cells?
 - (a) Parenchyma
 - (b) Sclerenchyma
 - (c) Collenchyma
 - (d) Epithelial tissue
2. Find out incorrect sentence
 - (a) Parenchymatous tissues have intercellular spaces
 - (b) Collenchymatous tissues are irregularly thickened at corners
 - (c) Apical and intercalary meristems are permanent tissues
 - (d) Meristematic tissues, in its early stage, lack vacuoles
3. Girth of stem increases due to
 - (a) apical meristem
 - (b) lateral meristem
 - (c) intercalary meristem
 - (d) vertical meristem
4. Which cell does not have perforated cell wall?
 - (a) Tracheids
 - (b) Companion cells
 - (c) Sieve tubes
 - (d) Vessels
5. Intestine absorb the digested food materials. What type of epithelial cells are responsible for that?
 - (a) Stratified squamous epithelium
 - (b) Columnar epithelium
 - (c) Spindle fibres
 - (d) Cuboidal epithelium
6. A person met with an accident in which two long bones of hand were dislocated. Which among the following may be the possible reason?
 - (a) Tendon break
 - (b) Break of skeletal muscle
 - (c) Ligament break
 - (d) Areolar tissue break

7. While doing work and running, you move your organs like hands, legs etc. Which among the following is correct?
- (a) Smooth muscles contract and pull the ligament to move the bones
 - (b) Smooth muscles contract and pull the tendons to move the bones
 - (c) Skeletal muscles contract and pull the ligament to move the bones
 - (d) Skeletal muscles contract and pull the tendon to move the bones
8. Which muscles act involuntarily?
- (i) Striated muscles
 - (ii) Smooth muscles
 - (iii) Cardiac muscles
 - (iv) Skeletal muscles
- (a) (i) and (ii)
 - (b) (ii) and (iii)
 - (c) (iii) and (iv)
 - (d) (i) and (iv)
9. Meristematic tissues in plants are
- (a) localised and permanent
 - (b) not limited to certain regions
 - (c) localised and dividing cells
 - (d) growing in volume
10. Which is *not* a function of epidermis?
- (a) Protection from adverse condition
 - (b) Gaseous exchange
 - (c) Conduction of water
 - (d) Transpiration
11. Select the incorrect sentence
- (a) Blood has matrix containing proteins, salts and hormones
 - (b) Two bones are connected with ligament
 - (c) Tendons are non-fibrous tissue and fragile
 - (d) Cartilage is a form of connective tissue
12. Cartilage is not found in
- (a) nose
 - (b) ear
 - (c) kidney
 - (d) larynx

- 13.** Fats are stored in human body as
- (a) cuboidal epithelium
 - (b) adipose tissue
 - (c) bones
 - (d) cartilage
- 14.** Bone matrix is rich in
- (a) fluoride and calcium
 - (b) calcium and phosphorus
 - (c) calcium and potassium
 - (d) phosphorus and potassium
- 15.** Contractile proteins are found in
- (a) bones
 - (b) blood
 - (c) muscles
 - (d) cartilage
- 16.** Voluntary muscles are found in
- (a) alimentary canal
 - (b) limbs
 - (c) iris of the eye
 - (d) bronchi of lungs
- 17.** Nervous tissue is not found in
- (a) brain
 - (b) spinal cord
 - (c) tendons
 - (d) nerves
- 18.** Nerve cell does not contain
- (a) axon
 - (b) nerve endings
 - (c) tendons
 - (d) dendrites
- 19.** Which of the following helps in repair of tissue and fills up the space inside the organ?
- (a) Tendon
 - (b) Adipose tissue
 - (c) Areolar
 - (d) Cartilage

- 20.** The muscular tissue which function throughout the life continuously without fatigue is
- (a) skeletal muscle
 - (b) cardiac muscle
 - (c) smooth muscle
 - (d) voluntary muscle
- 21.** Which of the following cells is found in the cartilaginous tissue of the body?
- (a) Mast cells
 - (b) Basophils
 - (c) Osteocytes
 - (d) Chondrocytes
- 22.** The dead element present in the phloem is
- (a) companion cells
 - (b) phloem fibres
 - (c) phloem parenchyma
 - (d) sieve tubes
- 23.** Which of the following does not lose their nucleus at maturity?
- (a) Companion cells
 - (b) Red blood cells
 - (c) Vessel
 - (d) Sieve tube cells
- 24.** In desert plants, rate of water loss gets reduced due to the presence of
- (a) cuticle
 - (b) stomata
 - (c) lignin
 - (d) suberin
- 25.** A long tree has several branches. The tissue that helps in the side ways conduction of water in the branches is
- (a) collenchyma
 - (b) xylem parenchyma
 - (c) parenchyma
 - (d) xylem vessels
- 26.** If the tip of sugarcane plant is removed from the field, even then it keeps on growing in length. It is due to the presence of
- (a) cambium
 - (b) apical meristem
 - (c) lateral meristem
 - (d) intercalary meristem

- 27.** A nail is inserted in the trunk of a tree at a height of 1 metre from the ground level. After 3 years the nail will
- (a) move downwards
 - (b) move upwards
 - (c) remain at the same position
 - (d) move sideways
- 28.** Parenchyma cells are
- (a) relatively unspecified and thin walled
 - (b) thick walled and specialised
 - (c) lignified
 - (c) none of these
- 29.** Flexibility in plants is due to
- (a) collenchyma
 - (b) sclerenchyma
 - (c) parenchyma
 - (d) chlorenchyma
- 30.** Cork cells are made impervious to water and gases by the presence of
- (a) cellulose
 - (b) lipids
 - (c) suberin
 - (d) lignin
- 31.** Survival of plants in terrestrial environment has been made possible by the presence of
- (a) intercalary meristem
 - (b) conducting tissue
 - (c) apical meristem
 - (d) parenchymatous tissue
- 32.** Choose the wrong statement
- (a) The nature of matrix differs according to the function of the tissue
 - (b) Fats are stored below the skin and in between the internal organs
 - (c) Epithelial tissues have intercellular spaces between them
 - (d) Cells of striated muscles are multinucleate and unbranched

- 33.** The water conducting tissue generally present in gymnosperm is
- (a) vessels
 - (b) sieve tube
 - (c) tracheids
 - (d) xylem fibres

Short Answer Questions

- 34.** Animals of colder regions and fishes of cold water have thicker layer of subcutaneous fat. Describe why?
- 35.** Match the column **(A)** with the column **(B)**

(A)	(B)
(a) Fluid connective tissue	(i) Subcutaneous layer
(b) Filling of space inside the organs	(ii) Cartilage
(c) Striated muscle	(iii) Skeletal muscle
(d) Adipose tissue	(iv) Areolar tissue
(e) Surface of joints	(v) Blood
(f) Stratified squamous epithelium	(vi) Skin

- 36.** Match the column **(A)** with the column **(B)**

(A)	(B)
(a) Parenchyma	(i) Thin walled, packing cells
(b) Photosynthesis	(ii) Carbon fixation
(c) Aerenchyma	(iii) Localized thickenings
(d) Collenchyma	(iv) Buoyancy
(e) Permanent tissue	(v) Sclerenchyma

- 37.** If a potted plant is covered with a glass jar, water vapours appear on the wall of glass jar. Explain why?
- 38.** Name the different components of xylem and draw a living component?
- 39.** Draw and identify different elements of phloem.

- 40.** Write true (T) or false (F)
- (a) Epithelial tissue is protective tissue in animal body.
 - (b) The lining of blood vessels, lung alveoli and kidney tubules are all made up of epithelial tissue.
 - (c) Epithelial cells have a lot of intercellular spaces.
 - (d) Epithelial layer is permeable layer.
 - (e) Epithelial layer does not allow regulation of materials between body and external environment.
- 41.** Differentiate between voluntary and involuntary muscles. Give one example of each type.
- 42.** Differentiate the following activities on the basis of voluntary (V) or involuntary (I V) muscles.
- (a) Jumping of frog
 - (b) Pumping of the heart
 - (c) Writing with hand
 - (d) Movement of chocolate in your intestine
- 43.** Fill in the blanks
- (a) Lining of blood vessels is made up of——.
 - (b) Lining of small intestine is made up of ——.
 - (c) Lining of kidney tubules is made up of——.
 - (d) Epithelial cells with cilia are found in——of our body.
- 44.** Water hyacinth float on water surface. Explain.
- 45.** Which structure protects the plant body against the invasion of parasites?
- 46.** Fill in the blanks
- (a) Cork cells possesses——on their walls that makes it impervious to gases and water.
 - (b) —— have tubular cells with perforated walls and are living in nature.
 - (c) Bone possesses a hard matrix composed of——and ——.
- 47.** Why is epidermis important for the plants?

48. Fill in the blanks

- (a) ——are forms of complex tissue.
- (b) ——have guard cells.
- (c) Cells of cork contain a chemical called——
- (d) Husk of coconut is made of ——tissue.
- (e) ——gives flexibility in plants.
- (f) ——and——are both conducting tissues.
- (g) Xylem transports——and——from soil.
- (h) Phloem transport——from——to other parts of the plant.

Long Answer Questions

- 49.** Differentiate between sclerenchyma and parenchyma tissues. Draw well labelled diagram.
- 50.** Describe the structure and function of different types of epithelial tissues. Draw diagram of each type of epithelial tissue.
- 51.** Draw well labelled diagrams of various types of muscles found in human body.
- 52.** Give reasons for
 - (a) Meristematic cells have a prominent nucleus and dense cytoplasm but they lack vacuole.
 - (b) Intercellular spaces are absent in sclerenchymatous tissues.
 - (c) We get a crunchy and granular feeling, when we chew pear fruit.
 - (d) Branches of a tree move and bend freely in high wind velocity.
 - (e) It is difficult to pull out the husk of a coconut tree.
- 53.** List the characteristics of cork. How are they formed? Mention their role.
- 54.** Why are xylem and phloem called complex tissues? How are they different from one other?
- 55.** (a) Differentiate between meristematic and permanent tissues in plants
(b) Define the process of differentiation
(c) Name any two simple and two complex permanent tissues in plants.