CHAPTER 6 – TISSUES

SUBJECTIVE QUESTIONS

I. VERY SHORT ANSWER TYPE QUESTIONS CARRYING

1. Define the process of differentiation
2. Why is epidermis important for the plant?
3. State one function of parenchyma.
4. Where is apical meristem found?
5. Name the tissue present in brain.

II. SHORT ANSWER TYPE QUESTIONS CARRYING 3 MARKS EACH

1. Give any three differences between bone and cartilage
2. How is tendon different from ligament?
3. How does cardiac muscle differ from both voluntary muscle and smooth muscle in its structure and its function?
4. Give a brief account of epithelial tissue.
5. (A) Name the different components present in phloem

   (B)Draw and label the components of phloem
6. (A) What type of tissue is found at the shoot apex?

   (B) Give the special features of the tissue
7. Differentiate between parenchyma, collenchyma and sclerenchyma on the basis of cellwall.
8. Animals of colder regions and fishes of cold water have thicker layer of subcutaneousfat. Describe why?
9. If a potted plant is covered with a glass jar, water vapors appear on the wall of glass jar.Explain.

III. Board based questions

1. Multicellular organisms show division of labour. Explain with the help of an example.
2. What are the different elements present in xylem? Give the functions performed by eachone.
3. Schematically represent different types of connective tissue and write the special featureof each one.
4. Give any three features of cardiac muscles
5. What are the functions of bones, cartilages and tendons?

ANSWER KEY

1	The loss of ability to divide by taking up a permanent shape, size and function iscalled differentiation. Cells develop into tissues and organs with the help of differentiation.	1
2	Covers the outermost part of the plant and protect from harmful bacteria for plants by resists its entry.	1
3	photosynthesis, food storage, sap secretion, and gas exchange.	1
4	Roots and shoot tips	1
5	Nervous tissue	1
1	The main difference between bone and cartilage are listed below. Bones are the hard, inelastic and a tough organ that forms part ofthe vertebral skeleton. Cartilage is a soft, elastic and flexible connective tissue that protects the bone from rubbing against each other.	3
2	Tendons are cord-like structures that transmit muscular force to a bone. On the contrary, ligaments are the structures that connect a bone to a bone.	3
3	Cardiac muscle is under involuntary control. It contracts rhythmically under control from the autonomic nervous system and is not under conscious control. Smooth muscle is under involuntary control and non-striated (unlike skeletal muscle). It's function is mainly in the gut and internal organs	3
4	General features – closely packed cells, no intercellular space, very little cementing material, extra cellular basement material etc.	3
5	Sieve tube, companion cell, parenchyma, fibre Diagram	3
6	a) Apical meristem b) Small actively dividing cells, no vacuoles, dense protoplasm	3
7	Parenchyma- thin and cellulosic, collenchyma – corners thick and made up of pectin, sclerenchyma – thick and made up of lignin	3
8	Fat deposit acts as insulator and thus prevents the loss of heat from body	3
9	Due to transpiration, loss of water in the form of water vapour through stomata	3
1	Mention the function of different systems	5
2	Tracheids and vessels – transport of water and minerals, parenchyma- storage and lateral conduction, fibres – mechanical support	3
3	Special feature of Blood, bone, cartilage, adipose and areolar	5
4	Cardiac – striated, involuntary, branched, cylindrical	3
5	Bone – structural frame work and movement Cartilage – Provides flexibility and helps in movementTendons – Connectmuscle to bones	3