Important Questions Class 9 Science Chapter 6: Chapter 6 of CBSE Class 9 Science deals with the concept of Tissues. This chapter focuses on how cells group together to form tissues, which perform specific functions in plants and animals.

By practicing these important questions students can revise topics like the differences between plant and animal tissues, types of meristematic and permanent tissues in plants and various animal tissues such as epithelial, connective, muscular and nervous tissues. These questions are created to help students grasp the fundamental concepts more thoroughly and prepare effectively for their exams.

Important Questions Class 9 Science Chapter 6 Overview

The important questions for Class 9 Science Chapter 6 Tissues has been created by subject experts of Physics Wallah to help students understand the core concepts of the chapter. These questions cover all major topics, including the classification of plant tissues into meristematic and permanent tissues, as well as the different types of animal tissues like epithelial, connective, muscular and nervous tissues.

By solving these questions students can strengthen their understanding of how tissues contribute to the structure and function of living organisms.

Important Questions Class 9 Science Chapter 6 PDF

The PDF for important questions from Class 9 Science Chapter 6 Tissues is available for download below. This PDF contains important questions that will help students review the chapter and prepare effectively for their exams. Download the PDF to practice and enhance your understanding of the concepts covered in the chapter.

Important Questions Class 9 Science Chapter 6 PDF

Important Questions Class 9 Science Chapter 6 Tissues

Here we have provided Important Questions Class 9 Science Chapter 6 Tissues-

Very Short Answer Questions 1 Marks

Q.1. Where is apical meristem found?

Ans: The apical meristem is found in the growing tips of stems and roots in plants.

Q.2. Which tissue makes up the husk of coconut?

Ans: Sclerenchyma tissue.

Q.3. What are the constituents of phloem?

Ans: Sieve tubes, companion cells, phloem parenchyma and phloem fibers (bast).

Q.4. Name the tissue responsible for movement in our body.

Ans: Muscle/muscular tissue.

Q.5. Vertical growth in plants takes place by:

(a) Lateral meristem
(b) Apical meristem
(c) Intercalary meristem
(d) None of the above

Ans: (b) Apical meristem.

Q.6. Which of these components of blood fight infection?

(a) RBC
(b) WBC
(c) Platelets
(d) Serum

Ans: (b) WBC.

Q.7. In desert plants, the rate of water loss gets reduced due to the presence of:

(a) Cuticle
(b) Stomata
(c) Lignin
(d) Suberin

Ans: (a) Cuticle.

Q.8. Cartilage is not found in:

(a) Nose
(b) Ear
(c) Kidney
(d) Larynx

Ans: (c) Kidney.

Q.9. Which of these types of cells is most likely to divide?

(a) Epidermis
(b) Parenchyma
(c) Meristem
(d) Xylem

Ans: (c) Meristem.

Q.10. Companion cells are associated with:

(a) Sieve tubes
(b) Sclerenchyma
(c) Vessels
(d) Parenchyma

Ans: (a) Sieve tubes.

Q.11. Which tissue has chloroplast in cells?

(a) Parenchyma
(b) Chlorenchyma
(c) Sclerenchyma
(d) Aerenchyma

Ans: (b) Chlorenchyma.

Q.12. Intestine absorbs digested food materials. What type of epithelial tissue is responsible for that?

(a) Stratified squamous epithelium
(b) Columnar epithelium
(c) Pseudostratified epithelium
(d) Cuboidal epithelium

Ans: (b) Columnar epithelium.

Short Answer Questions (2 Marks)

Q.1. What is a tissue?

Ans: A tissue is a group of cells that are similar in origin and structure, specialized to perform a particular function. Tissues function efficiently by grouping cells together. Examples include blood, phloem, and muscle.

Q.2. What are the constituents of phloem?

Ans: The five constituents of phloem are sieve cells, sieve tubes, companion cells, phloem parenchyma, and phloem fibers.

Q.3. Name types of simple tissues.

Ans: The three types of simple tissues are:
i) Parenchyma
ii) Collenchyma
iii) Sclerenchyma

Q.4. What does a neuron look like?

Ans: A neuron consists of a cell body from which long, thin, hair-like parts arise. It has a single long part called an axon and many short, branched parts called dendrites.

Q.5. How many types of elements together make up the xylem tissue? Name them.

Ans: Xylem tissue consists of four types of elements:
i) Tracheids
ii) Vessels
iii) Xylem fibers
iv) Xylem parenchyma

Q.6. How are simple tissues different from complex tissues in plants?

Ans:

Simple Tissues: Consist of only one type of cell and work as individual units to perform specific functions.
Complex Tissues: Consist of more than one type of cell that work together as a unit to perform a particular function.

Q.7. Differentiate between parenchyma, collenchyma, and sclerenchyma on the basis of their cell wall.

Ans:

Parenchyma: Thin cell walls made up of cellulose.

Collenchyma: Cell walls thickened at the corners, made up of cellulose.

Sclerenchyma: Very thick cell walls made up of lignin.

Q.8. What are the functions of stomata?

Ans: The functions of stomata are:
i) Gaseous exchange with the atmosphere.
ii) Transpiration, which involves the removal of excess water through water vapor formation.

Q.9. What is the specific function of the cardiac muscle?

Ans: Cardiac muscles are responsible for pumping blood throughout the body by rhythmic contraction and relaxation. They work continuously without fatigue.

Q.10. Name the following:

(a) Tissue that forms the inner lining of our mouth.
Ans: Epithelial tissue.

(b) Tissue that connects muscle to bone in humans.
Ans: Tendon.

(c) Tissue that transports food in plants.
Ans: Phloem.

(d) Tissue that stores fat in our body.
Ans: Adipose tissue.

(e) Connective tissue with a fluid matrix.
Ans: Blood.

(f) Tissue present in the brain.
Ans: Nerve tissue.

Q.11. Identify the type of tissue in the following: skin, bark of tree, bone, lining of kidney tubule, vascular bundle.

Ans:

Skin: Squamous epithelial tissue.

Bark of tree: Epidermal tissue.

Bone: Connective tissue.

Lining of kidney tubule: Cuboidal epithelial tissue.

Vascular bundle: Complex permanent tissue.

Q.12. Name the regions in which parenchyma tissue is present.

Ans: Parenchyma tissue is found in soft plant parts such as leaf mesophyll, young stems, roots, leaves, vascular bundles, flowers, and fruits.

Q.13. What is the role of epidermis in plants?

Ans: The epidermis acts as a protective layer for all plant parts. It helps prevent water loss, controls gas exchange, and secretes a waxy, water-resistant layer for protection.

Q.14. How does the cork act as a protective tissue?

Ans: Cork cells are dead, compactly arranged, and have suberin deposits in their walls, making them hard and impermeable. This protects plants from unfavorable conditions and microbial attacks.

Q.15. What are meristematic and permanent tissue?

Ans:

Meristematic Tissue: It is a dividing tissue responsible for plant growth, classified as apical, lateral, or intercalary.

Permanent Tissue: Formed by meristematic tissue cells that lose their ability to divide, they differentiate into permanent tissues with specific shapes and functions.

Q.16. Write the difference between cartilage and bone:

Cartilage	Bone
Soft and flexible	Hard and inflexible
Non-porous	Porous
No blood vessels	Blood vessels are present
Matrix is made up of protein	Matrix is made up of calcium and magnesium salts

Q.17. How many types of elements are present in the phloem?
Ans: Four types of elements are present in the phloem:

- **Sieve tube:** Helps in the conduction of food material.
- **Companion cells:** Assist the sieve tube in food conduction.
- **Phloem parenchyma:** Storage function.
- **Phloem fibers:** Provide mechanical support.

Short Answer Questions (3 Marks)

Q.1. What is the utility of tissues in multicellular organisms?

Ans: In multicellular organisms, tissues enable the division of labor among different cell groups. Specific functions are performed by different types of tissues, allowing complex processes to occur efficiently. For example, the brain controls bodily functions, the heart pumps blood, kidneys filter waste, and sense organs gather information. This specialization is essential for the organism's survival and proper functioning.

Q.2. Give three features of cardiac muscles.

Ans: i. Cardiac muscles are involuntary and operate without conscious control.
ii. The cells are cylindrical, branched, striated, and uninucleate.
iii. They contract and relax rhythmically.

Q.3. What are the functions of areolar tissue?

Ans: Areolar tissue is a connective tissue that performs several functions, including:
i) Filling spaces inside organs.
ii) Supporting internal organs.
iii) Assisting in tissue repair.

Q.4. Diagrammatically show the difference between the three types of muscle fibres.

Ans:

Muscle Fibres	Visceral	Skeletal	Cardiac
Contracts	Slowly	Rapidly	Rapidly
Found	Viscera, Blood vessels	Trunk, Extremities, Head and neck	Heart
Control	Involuntary	Voluntary	Involuntary

Q.5. Differentiate between striated, unstriated, and cardiac muscles on the basis of their structure and site/location in the body.

Ans:

Feature	Striated Muscles	Unstriated Muscles	Cardiac Muscles
Striations	Light and dark bands present	No striations	Striations present
Cell Shape	Elongated, cylindrical, unbranched	Long, spindle-shaped, unbranched	Cylindrical and branched
Nuclei	Multinucleate	Uninucleate	Uninucleate
Function	Voluntary movements	Involuntary (walls of organs, vessels)	Involuntary (heart contractions)

Q.6. How many types of tissues are found in animals? Name the different types.

Ans: Animals have four main types of tissues:

(a) **Epithelial Tissue:** Forms protective coverings.
(b) **Connective Tissue:** Provides support and binds other tissues.
(c) **Muscular Tissue:** Facilitates movement through contraction.
(d) **Nervous Tissue:** Receives, processes, and transmits signals.

Q.7. Differentiate between voluntary and involuntary muscles. Give one example of each.

Ans:

Feature	Voluntary Muscles	Involuntary Muscles
Location	Attached to bones	Attached to visceral organs
Control	Move by conscious will	Function without conscious control
Cell Structure	Long, cylindrical, multinucleate	Uninucleate, often spindle-shaped
Example	Muscles in limbs	Heart muscle

Q.8. What are the major functions of blood?

Ans: Blood is a connective tissue with several functions:

Transports oxygen, nutrients, hormones, and waste products.

Regulates body temperature by distributing heat.

Protects against disease via white blood cells and aids in wound healing.

Contains platelets for blood clotting.

Q.9. Write about the functions of:

(a) **Epidermis:** Provides protection and forms a waterproof barrier to reduce water loss.
(b) **Cork:** Acts as a protective layer, preventing desiccation and injury while also blocking pathogens.
(c) **Stomata:** Small openings on leaves that facilitate gas exchange.

Q.10. Mention the characteristics features of connective tissue.
Ans: Connective tissue features include:

- Loosely spaced cells embedded in a non-living matrix.
- The matrix can be jelly-like, fluid, dense, or rigid.
- Its composition varies based on the specific function of the connective tissue.

Benefits of Important Questions Class 9 Science Chapter 6

Understand Key Ideas: Important questions help you grasp the main ideas about plant and animal tissues, making it easier to remember what you've learned.

Focus on What Matters: By studying important questions you can concentrate on topics that are most likely to appear in your exams, so you don't waste time on less important material.

Think Critically: Many important questions ask you to compare and contrast different tissues, helping you develop your thinking skills.

Remember Better: Practicing these questions can help you remember information longer, making it easier to recall during your exams.

Spot Weak Areas: When you answer important questions, you can see where you might need more practice, allowing you to focus on those areas.

Improve Writing Skills: Answering questions helps you learn to express your ideas clearly, which is important for writing good answers in exams.

Boost Confidence: Knowing you've practiced important questions makes you feel more confident and less anxious when taking your exams.

Prepare for Future Studies: Understanding these basic concepts sets a strong foundation for more advanced studies in science later on.