QUESTION BANK

EXERCISE - 1

Q.1 What is tissue ?
Q.2 Write the functions of collenchyma, parenchyma and sclerenchyma.
Q.3 How many types of elements are present in the phloem ?
Q.4 What is the function of phloem ?
Q.5 How many types of tissues are found in animals ?
Q.6 What is the specific function of cardiac muscle tissue ?
Q.7 What is the difference between cell and tissue ?
Q.8 Differentiate between Parenchyma and collenchyma.
Q.9 Name the following.
(a) Tissue that forms the inner lining of our mouth.
(b) Tissue that connects muscle to bone in humans.
(c) Tissue that transports food in plants.
(d) Tissue that stores fat in our body.
(e) Connective tissue with a fluid matrix.
(f) Tissue present in the brain.
Q.10 Describe the structure of neuron with a well-labelled diagram ?
Q.11 List the function of epithelial tissue. Where it is likely to be found in the human body ?
Q.12 Give summarised classification of animal-tissue ?
Q.13 Name the three kinds of muscles in human body giving one example of each.
Q.14 Name the kind of animal tissue in which
(i) Cells are flat, cuboidal or columnar, forming protective layer.
(ii) Cells produce and pour out chemical substances.
(iii) Cells can contract and relax.
(iv) Cells can conduct impulses.
Q.15 List one function for each of following : osteoblast, chondroblast, goblet cell, neuron, muscle cell, phloem.
Q.16 How many types of elements are present in the phloem?
Q.17 What is the function of erythrocytes (RBCs) and leukocytes (WBCs) in the human blood.
Q.18 Where is Chlorenchyma found in plant body ?
Q.19 Why are plant tissues mainly composed of dead cells ?
Q.20 Why does a thin and delicate layer of squamous epithelium line blood capillaries ?
Q.21 Which type of blood cells are nucleate at maturity ?
Q.22 Why are skeletal muscles called striated muscles ?
Q.23 What other structure is especially abundant in muscle cells
Q.24 What is the function of a fibroblast ?
Q.25 What is the function of adipose tissue ?
Q.26 What might be an advantage in cardiac muscle cells bring branched ?
Q.27 How is the branched structure of neurons related to their function ?
Q.28 Which bone will move when the muscle contracts ?
Q.29 What is the function of mitochondria in a muscle cell ?
Q.30 What is the source of energy for muscle cell contraction ?
Q.31 Which organ is composed of cardiac muscle tissue ?
Q.32 What is the primary function of red blood cells ?
Q.33 Where are association neurons found in the nervous system ?
Q.34 What is the overall purpose of a nervous system ?
Q.35 Why are reflexes important ?

HOTS QUESTIONS

Q.36 What type of epithelium would you expect to find in small blood vessels, the capillaries, which are site of diffusion of substances between the blood and tissues ? What type of epithelium would you expect to find in the ducts of the pancreas, which carry digestive enzymes to the small intestine and which produce a watery secretion ? What type of epithelium would you expect to find lining the mouth ?

Q.37 In tendons, collagen fibres are oriented parallel to the length of the tendon. In the skin, collagen fibres are oriented in many direction. What are the functional advantages of the fiber arrangements in tendons and in the skin ?

Q.38 Differentiate between Meristematic and Permanent tissue.

Q.39 Make a table that summarizes the characteristics of the three major muscles types. The muscle types should form a column at the left side of the table and the characteristics of muscle should from a row at the top of the table.

Q.40 Describe the four types of tissue found in animals
(a) Epithelial (b) Connective (c) Nervous (d) Muscular

Q.41 Fill in the following table relating to muscle tissue.

	Nucleus	Striations
Smooth	(a)	(b)
Skeletal	(c)	(d)
Cardiac	(e)	(f)

Q.42 Explain the knee-jerk reflex from a neurological point of view.

Q.43 What is the role of dendrite versus axon in neuron function?

Q.44 How do simple tissues differ from complex tissues ? Give examples of each.

EXERCISE - 2

Fill in the blanks

Q.1 Most of the plant tissues consist of ..... cells to provide mechanical strength.

Q.2 ..... tissues are regions where cells have lost their ability to divide.

Q.3 Elongated cells with thickenings at corners constitute .....

Q.4 Tracheids and vessels are the main ..... elements in the xylem.

Q.5 Lining of alveoli and blood capillaries is formed by ..... epithelium.

Q.6 ..... connect bones to bones long thick unbranched fibre called axon.

Q.7 Within the phloem, ... cells are found in association with sieve cells.

Q.8 The ..... meristem is located at the tips of the root stem or branch.

Q.9 Secondary growth in plants is due to the activities of the ....

Q.10 The dense connective tissues that connect muscle to bone are called .....

Q.11 Opposing muscle pairs are called ..... because they move in opposite directions.

Q.12 The current explanation of muscle contraction is known as the ..... theory.

Q.13 Tissue is a group of cells similar in ..... and .....

Q.14 Plant tissues are of two main types ..... and .....

Q.15 Permanent tissues are derived from ..... tissue once they lose the ability to divide.

Q.16 Xylem and phloem are types of ..... tissues.

Q.17 Nervous tissue is made of ..... that receive and conduct impulses.

True-False Statements–

Q.18 Parenchyma tissue consists of living cells only.

Q.19 Cuticle layer always covers epidermis in plants.

Q.20 It is through the epidermal tissues of a plant that materials are transported.

Q.21 The palisade layer of the leaf is composed of photosynthetic parenchyma cells.
Q.22 The cells that make up the meristematic region of a plant are specialized and differentiated.
Q.23 Xylem and phloem are specialized conductive tissues that transport materials through the plant.
Q.24 Histology is the study of cells and tissues.
Q.25 Connective tissue functions in binding and supporting animal tissues.
Q.26 Adipose tissue is a type of connective tissue.
Q.27 Blood is a type of connective tissue.
Q.28 Schwann cells insulate nerve fibers within the nervous system.
Q.29 Melanocytes in the skin are responsible for waterproofing–
Q.30 Voluntary muscles do not get tired on sustained use.
Q.31 Animal tissues can be epithelial, connective, muscular and nervous tissue.
Q.32 Striated, unstriated and cardiac are three types of muscle tissues.

EXERCISE - 3 (MCQ LEVEL 1)

Q.1 Meristematic tissues responsible for increase in girth of plants are-
(A) Apical meristems (B) Intercalary meristems
(C) Both apical and intercalary meristems (D) Lateral Meristems

Q.2 Cell wall in cork is impervious to water and gases due to presence of :
(A) Lignin (B) Pectin (C) Suberin (D) Cellulose

Q.3 Cardiac muscle cells are cylindrical branched :
(A) Uninucleate and voluntary (B) Uninucleate and involuntary
(C) Multimtcleate and voluntary (D) Multinucleate and involuntary

Q.4 The cells of a tissue are similar in –
(A) Structure (B) Function (C) Origin (D) Both (A) and (B)

Q.5 Simple epithelium is –
(A) One cell thick (B) Two cells thick (C) Two or three cells thick (D) All are correct

Q.6 Which is not an example of tissue –
(A) Epidermis (B) A colony of protozoa (C) Blood (D) Grey mattery of spinal cord

Q.7 Which part of body's weight is formed by connective tissue –
(A) 40% (B) 30% (C) 20% (D) 60%

Q.8 A connective tissue –
(A) Has no matrix (B) Covers the skin (C) Has abundant matrix (D) None of these

Q.9 Which of the following tissue is more elastic –
(A) Bond (B) Cartilage (C) Both are equally elastic (D) Both are not elastic

Q.10 The fibrous tissue which connects the two bone is –
(A) Connective tissue (B) Tendon (C) Ligament (D) Adipose tissue

Q.11 Largest number of cell bodies of neuron in our body are found in –
(A) Retina (B) Spinal cord (C) Brain (D) Tongue

Q.12 Longest cell in human body may be –
(A) Nerve cell (B) Leg muscle cell (C) Bone cell (D) Heart muscle cell

Q.13 Nervous are classified on the basis of –
(A) Number of nucleus present (B) Number of processes arising from the cell body
(C) Number of dendrites present (D) Number of axons present

Q.14 The tissues which transport food materials in plants are –
(A) Phloem (B) Xylem (C) Parenchyma (D) Phloem and xylem both

Q.15 Collenchyma is –
(A) Photosynthetic tissue (B) Water conducting tissue
(C) Living, supporting tissue (D) Dead, mechanical tissue

Q.16 Tissues that are above long and narrow cells are called –
(A) Cuboidal epithelium (B) Squamous epithelium
(C) Germinal epithelium (D) Columnar epithelium

Q.17 Pigment tissue are present in –
(A) Skin (B) Liver (C) Heart (D) Ear

Q.18 Which of the following tissue is found under the category of simple connective tissue –
(A) White fibrous tissue (B) Areolar tissue (C) Yellow fibrous tissue (D) Cartilage tissue

Q.19 In which direction does a nerve impulse move –
(A) dendrite, cell body, axon (B) dendrite, axon, cell body
(C) axon, cell body, dendrite (D) axon, dendrite, cell body

Q.20 Muscular tissues are formed by –
(A) Ectoderm cells (B) Endoderm cells (C) Mesoderm cells (D) All the above three

Q.21 Synapse in the junction of –
(A) Dendrites (B) Simply nerves (C) Nucleus (D) Axon

Q.22 Sieve tubes are associated with –
(A) Xylem tissue (B) Cambium (C) Phloem (D) Cortex

Q.23 Cells which takes part in secondary growth are named as –
(A) Phloem (B) Xylem (C) Cambium (D) Medullary ray

Q.24 The mechanical tissue consisting of living cells is the –
(A) sclerenchyma (B) collenchyma (C) parenchyma (D) chlorenchyma

Q.25 The trunks of trees increase in girth because of mitotic activing in the –
(A) vascular tissue (B) epidermis (C) meristematic tissue (D) pith

Q.26 Commercial cork is a derivative of the –
(A) xylem (B) vascular cambium (C) phellogen (D) phloem

Q.27 The largest number of cell bodies of neurons in our body, is found in the –
(A) tongue (B) brain (C) both (D) kidneys

Q.28 Thin filaments in myofibrils consist of –
(A) actin and accessory proteins (B) sarcomeres
(C) cross-bridges (D) Z lines

Q.29 The deep infoldings of muscle fiber membranes that conduct action potentials are called –
(A) sarcoplasmic reticula (B) Z lines (C) myofilaments (D) T tubules

Q.30 The force of muscle contraction depends on the –
(A) number of muscle fibers stimulated
(B) number of motor units stimulated
(C) frequency of action potentials in each motor unit
(D) all of the above

Q.31 Smooth muscle fibers can be distinguished from striated ones because smooth fibers –
(A) contract more rapidly (B) lack regular arrangements of sarcomeres
(C) lack gap junctions (D) contain only actin filaments

Q.32 The mesophyll of a leaf consists of –
(A) Spongy parenchyma cells (B) Palisade parenchyma cells
(C) Both spongy and palisade parenchyma cells (D) Pith cells

Q.33 A plant shoot's growth in length is due to cell division in the –
(A) Vascular cambium (B) Apical meristem (C) Cortex (D) Cork cambium

Q.34 The vascular tissues of the plant function in:
(A) Support (B) Support and transport of materials
(C) Secretion of plant hormones (D) All of the above

Q.35 When comparing sieve tube elements with companion cells, which of the following statements is true –
(A) Xylem cells are alive at maturity.
(B) Companion cells lack cytoplasmic material and a nucleus at maturity.
(C) Companion cells contain a nucleus and cytoplasm at maturity.
(D) Sieve tube elements are found in xylem.

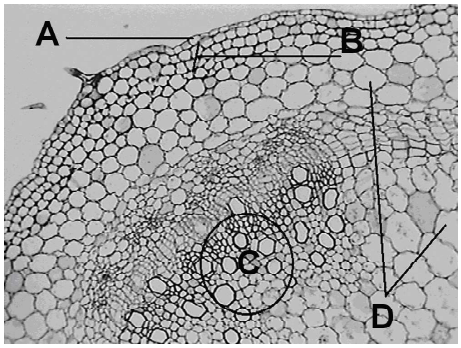
Q.36 The currently accepted model for the explanation of striated muscle contraction is called the
(A) Sliding filament hypothesis (B) Z-band shortening hypothesis
(C) Fluid mosaic model (D) Hydrophobic model

Q.37 In comparison with other cells, nerve cells show a higher degree of –
(A) Metabolism (B) Growth (C) Contractibility (D) Irritability

Q.38 The layer of skin that wrinkles as a person gets older.
(A) epidermis (B) dermis (C) connective tissue (D) epidermis and dermis

Q.39 Which tissue lacks blood supply and heals slowly –
(A) nervous (B) muscle (C) cartilage (D) bone

Note : Answer Q.40-Q.44 for the figure shown –



Q.40 What is the tissue represented in A –
(A) Collenchyma (B) Parenchyma (C) Sclerenchyma (D) Epidermis

Q.41 What is the tissue represented in B –
(A) Parenchyma (B) Collenchymal (C) Sclerenchyma (D) Hyperdermis

Q.42 What is the tissue enclosed in the oval labeled C –
(A) Phloem (B) Xylem (C) Fibers (D) Parenchyma

Q.43 What is the function of the tissue represented in D –
(A) Transport water (B) Transport food (C) Storage (D) Photosynthesis

Q.44 What is the tissue represented in D –
(A) Parenchyma (B) Chloroenchyma (C) Collenchyma (D) Hypodermis

EXERCISE - 4 (MCQ LEVEL 2)

MATCH THE COLUMN

Each question contains statements given in two columns which have to be matched. Statements (A, B,C, D) in **column I** have to be matched with statements (p, q, r, s) in **column II**.

Q.1 Matching. Basic Tissue Types. Match the tissue types with their functions in Column A, then match them with their distinctive cell types in Column B.

Column I	**Column II**
(A) Dermal tissue	(p) adds new cells through growth
(B) meristematic tissue	(q) conduct water and dissolved nutrients
(C) ground tissue	(r) covers, protects plant; regulates gas exchange
(D) vascular tissues	(s) makes up bulk of plant; stores nutrients; photosynthesizes

Q.2 Match the connective tissue type with its location in the body.

Column I	Column II
(A) loose connective	(p) ears and joints
(B) dense connective	(q) circulatory system
(C) blood	(r) under skin
(D) cartilage	(s) ligaments and tendons

ASSERTION & REASON TYPE

Each question contains STATEMENT-1 (Assertion) and STATEMENT-2 (Reason). Each question has 5 choices (A), (B), (C), (D) and (E) out of which ONLY ONE is correct.

(A) Statement-1 is True, Statement-2 is True; Statement-2 is a correct explanation for Statement-1.
(B) Statement-1 is True, Statement-2 is True; Statement-2 is NOT a correct explanation for Statement-1.
(C) Statement -1 is True, Statement-2 is False.
(D) Statement -1 is False, Statement-2 is True.
(E) Statement -1 is False, Statement-2 is False.

Q.3 **Statement 1 :** Smooth muscle fibres do not appear to be striated.
Statement 2 : This is due to regular alternate arrangement of thick and thin filaments is smooth muscle fibre.

Q.4 **Statement 1 :** Presence of connective tissue inside the brain is essential for conduction of nerve impulse.
Statement 2 : Connective tissue hold together the nerve cells of brain.

Q.5 **Statement 1 :** Epithelial tissues protect the under lying and over lying tissues.
Statement 2 : Materials are exchanged at the surfaces across the epithelial tissues.

Q.6 **Statement 1 :** Cartilage (protein matrix) and bone (calcium matrix) are rigid connective tissue.
Statement 2 : Blood is connective tissue in which plasma is the matrix.

Q.7 **Statement 1:**Connective tissue contains a large amount of non living intercellular or extracellular matrix.
Statement 2 : Intercellular substance is usually made up of protein fibres.

Q.8 **Statement 1 :** Areolar tissue is a connective tissue.
Statement 2 : Arelar tissue is found beneath epithelia of stomach.

Q.9 **Statement 1 :** Unit of nervous tissue is neuron.
Statement 2 : The nerve tissue is developed from ectoderm.

Q.10 **Statement 1 :** Vascular supply to leaf is called as leaf trace in higher plants.
Statement 2 : The leaf trace extends between the leaf base and point where it merges with stem.

Q.11 **Statement 1 :** A complex tissue or compound tissue is a collection of different types of cells that help in the performance of a common function.
Statement 2 : The complex tissues are assemblage of living and dead cells and may be primary or secondary upon their mode of origin.

EXERCISE - 5 (PREVIOUS YEARS COMPETITION MCQ)

Q.1 The specialized tissue includes –
(A) sclereid (B) sclerenchyma (C) nectaries (D) collenchyma

Q.2 Simple tissues are –
(A) parenchyma, xylem and collenchyma (B) parenchyma, collenchyma and sclerenchyma
(C) parenchyma, xylem and sclerenchyma (D) parenchyma, xylem and phloem

Q.3 Meristematic tissues are found in –
(A) only stems of the plants (B) both roots and stems
(C) in all growing tips of the plant body (D) only roots of the plants

Q.4 Aerenchyma is formed by –
(A) parenchyma (B) collenchyma (C) scelerechyma (D) xylem

Q.5 The living cells providing tensile strength are –
(A) parenchyma (B) collenchyma (C) sclerenchyma (D) sclerotic cells

Q.6 Quiescent centre is found in –
(A) root tip (B) cambium (C) shoot tip (D) leaf tip

Q.7 The characteristics feature of water storage tissue is –
(A) large sized cells (B) thin cell walls
(C) presence of mucliage (D) presence of vacuoles

Q.8 Group of cells with same origin and function is –
(A) organ (B) simple tissue (C) any tissue (D) compound tissue

Q.9 The conducting cells of xylem are –
(A) traechery elements (B) sieve elements (C) companion cells (D) all above

Q.10 Parenchyma has –
(A) intercellular spaces and uniform thickening (B) deposition on corners
(C) deposition on angles (D) deposition in form of bands

Q.11 Which of the following helps in translocation of food is plants –
(A) Xylem (B) Phloem (C) Sclerenchyma (D) Collenchyma

Q.12 The apical meristem of the root is present –
(A) only in radicals (B) only in tap roots (C) only in adventitious (D) in all the roots

Q.13 Periderm is formed form –
(A) phelloderm (B) phellogen (C) fascicular cambium (D) interfascicular cambium

Q.14 The chief function of vessels in the plant body is –
(A) to translocate food material (B) to conduct water and mineral salts
(C) to support living cells (D) all above

Q.15 Tracheids and vessels are associated with –
(A) xylem of pteridophytes (B) xylem of angiosperms
(C) xylem of gymnosperms (D) all above

Q.16 Undifferentiated ground tissue is met with in –
(A) cucurbita stem (B) maize stem (C) pea stem (D) sunflower stem

Q.17 Which of the following is an epidermal cell –
(A) Guard cells (B) Root hairs (C) Trichome (D) All of these

Q.18 Vascular tissue system in root is –
(A) collateral (B) radial (C) concentric (D) biocollateral

Q.19 Conjuctive tissue is present in –
(A) Tinospora (B) Boehmaria (C) Mirabilis (D) Pinus

Q.20 Inner surface of fallopian tubes, bronchi and bronchioles are lined by –
(A) Squamous epithelium (B) Ciliated epithelium
(C) Columnar epithelium (D) Cubical epithelium

Q.21 Which of the following cells of connective tissue secrete antibodies –
(A) Mast cells (B) Reticular cells (C) Adipose cells (D) Plasma cells

Q.22 Average life span of human R.B.C. is –
(A) 100 days (B) 90 days (C) 120 days (D) None

Q.23 Blood cells which show phagocytosis is –
(A) Platelet (B) Eosinophil (C) Basophil (D) Monocyte

Q.24 Which of the following substances, if introduced into the blood stream, cause coagulation of blood at the site of its introduction–
(A) Fibrinogen (B) Prothrombin (C) Heparin (D) Thromboplastin

Q.25 The process of formation of blood corpuscles is called –
(A) Haemopoiesis (B) Heamolysis (C) Heamozoin (D) None of these

Q.26 Which set clearly identify striated muscles –
(A) Cylindrical, syncytial and unbranched (B) Spindle, unbranched and uninucleated
(C) Cylindrical, striped and nucleated (D) Cylindrical, striped and branched

EXERCISE - 6

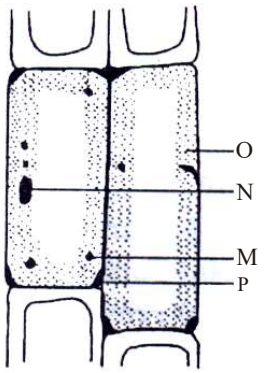
PREVIOUS YEARS SA (SUMMATIVE ASSESSMENT) QUESTIONS

Q.1 Division of labour exists even at intracellular level. Justify the statement by giving two examples.

Q.2 What is differentiation of meristematic tissues ?

Q.3 With the help of diagrams differentiate between parenchyma and collenchyma cells.

Q.4 Given in the diagram showing longitudinal section of collenchyma tissues. Label the parts M, N, O and P in the given diagram.



Q.5 List any four salient features of meristematic tissue.

Q.6 In a temporary mount of a leaf epidermis, we observe small pores.
(a) What are the pores present in leaf epidermis called ?
(b) How are these pores beneficial to the plant ?

Q.7 Differentiate between aerenchyma and chlorenchyma.

Q.8 Name the simple permanent tissue which
(a) Forms the basic packing tissue. (b) Provides flexibility in plants.

Q.9 Name four components of phloem.

Q.10 What is epidermis ? What is its role ?

Q.11 Write two basic structural differences between parenchyma and collenchyma tissues.

Q.12 Write three distinguishing features between cells of meristematic and permanent plant tissues.

Q.13 List in tabular form three distinguishing features between parenchyma and collenchyma.

Q.14 State one distinguishing feature and one similarity between the two types of transporting tissues present in plants.

Q.15 Name the tissue that forms the husk of coconut. Draw and label its parts.
Name the substance that hardens this tissue.

Q.16 Explain how the bark of a tree is formed. How does it at as protective tissue ?

Q.17 Give reasons for the following :
(a) Cells of sclerenchyma tissue have a narrow lumen. (b) Branches of a tree move and bend freely in high wind velocity. (c) It is difficult to pull out the husk of coconut.

Q.18 (a) List the constituting cells of xylem. (b) State two important functions of xylem.

Q.19 (a) Which element of phloem comprises of dead cells ?
(b) Draw a diagram of xylem parenchyma and label nucleus.

Q.20 List any six characteristics of parenchyma tissue.

Q.21 What do you understand by complex tissue ? Name the two types of complex permanent tissue present in plants. Give one function of each complex tissue.

Q.22 Give reasons for the following :
(a) Bark of a tree is impervious to gases and water.
(b) In desert plants, epidermis has a thick waxy coating.
(c) Epidermal cells of the roots generally have hair like parts.

Q.23 What is a meristematic tissue ? State its different types. Show their locations in a diagram of a plant body. Give classification of meristems.

Q.24 Write the functions of bone, cartilage, tendon and ligament.

Q.25 Write two locations of the following animal tissues :
(i) Simple squamous epithelial cells (ii) Cuboidal epithelium

Q.26 How does the bone matrix differ from the matrix of cartilage ?

Q.27 List any two functions of epithelial tissue in human body.

Q.28 (a) Voluntary muscles are also known as skeletal muscles. Justify.
(b) Give two structured characteristics of these voluntary muscles.

Q.29 (a) Which connective tissue matrix contains salts of calcium and phosphorus ?
(b) Which connective tissue is present in ear ?
(c) Which connective tissue connects two bones ?
(d) Which connective tissue is found in the bone marrow ?

Q.30 Make a table to show the difference between striated, unstriated and cardiac muscles on the basis of their structure and location in the body.

Q.31 State one important function of each of the following :
(a) Glandular epithelium (b) Nervous tissue (c) Cubodial epithelium

Q.32 Identify the type of muscular tissues having following characteristics :
(i) Cylindrical, branched and uninucleated. (ii) Long with pointed ends and uninucleated.
(iii) Long cylindrical, unbranched and multinucleated.

Q.33 What is a connective tissue? State its any two basic components. Differentiate between ligament and tendon.

Q.34 (a) Draw a labelled diagram of a neuron.
(b) Identify the tissue which is made up of these cells. (c) Name one organ that is made of this tissue.

Q.35 Draw diagrams to show the difference between the structures of the three types of muscle fibres.

Q.36 Write the location and one function of each of the following ?
(a) Cuboidal epithelium (b) Glandular epithelium (c) Columnar epithelium

Q.37 (a) Name the connective tissue that is found between skin and muscles.
(b) Draw its diagram and label any three parts.

Q.38 Name the liquid matrix of the blood. What does it contain ? List any two functions of blood.

Q.39 Name the type of epithelial tissue that lines the following :
(i) Oesophagus (ii) Respiratory tract (iii) Kidney tubules
(iv) Inner lining of intestine (v) Blood vessels (vi) Ducts of salivary glands.

Q.40 Identify the type of tissues in the following :
(a) Vascular bundle (b) Lining of kidney tubule
(c) Iris of the eye (d) Muscles of the heart (e) Bronchi of lungs

Q.41 Give the location and functions of the following tissues :
(a) Cartilage (b) Areolar tissue (c) Adipose tissue

VALUE BASED QUESTIONS

Q.42 "Water hyacinth plant floats on water surface". Name the tissue and its type due to which it is possible and also explain the special feature of this tissue that helps in this.

Q.43 You can very easily bend the stem of a plant without breaking it. Name of tissue in the plant which makes it possible. Where is it located ? State any two characteristic features of the cells of this tissue.

Q.44 Uma started walking fast when she notices that some unknown faces are following her. Name the two types of tissues which facilitated the movement of her leg bones in response to the stimulus.

Q.45 A horse and a magno tree both are complex living organisms with specialised yet different tissue systems to perform the basic life processes. Give two reasons for possessing different tissues to perform similar functions.

ANSWER KEY

EXERCISE - 2

(1) Dead **(2)** Permanent **(3)** Collenchyma **(4)** Conducting
(5) Simple **(6)** Ligaments **(7)** companinon **(8)** apical
(9) lateral meristem **(10)** tendons **(11)** antagonistic **(12)** sliding filament
(13) structure, function **(14)** meristematic, permanent **(15)** meristematic **(16)** complex
(17) neurons **(18)** True **(19)** False **(20)** False
(21) True **(22)** False **(23)** True **(24)** True
(25) True **(26)** True **(27)** True **(28)** True
(29) False **(30)** False. **(31)** True **(32)** True

EXERCISE - 3

Q	1	2	3	4	5	6	7	8	9	10	11
A	D	C	B	D	A	B	B	C	B	C	C
Q	12	13	14	15	16	17	18	19	20	21	22
A	A	B	A	C	D	A	B	A	C	B	C
Q	23	24	25	26	27	28	29	30	31	32	33
A	C	B	C	C	B	A	D	D	B	C	B
Q	34	35	36	37	38	39	40	41	42	43	44
A	B	C	A	D	B	C	D	B	B	C	A

EXERCISE - 4

(1) (A) → p (B) → q (C) → r (D) → s **(2)** (A) → r (B) → s (C) → q (D) → a
(3) (C) **(4)** (E) **(5)** (B) **(6)** (B) **(7)** (B)
(8) (B) **(9)** (B) **(10)** (B) **(11)** (A)

EXERCISE - 5

Q	1	2	3	4	5	6	7	8	9	10	11
A	C	B	C	A	B	A	D	B	A	A	B
Q	12	13	14	15	16	17	18	19	20	21	22
A	D	B	B	B	B	D	B	A	B	B	C
Q	23	24	25	26							
A	D	D	A	A							

EXERCISE - 6

(4) M – Chloroplast, N – Nucleus, O – Cytoplasm, P – Intercellular space.
(9) (i) Sieve tube (ii) Companion cells (iii) Phloem fibres (iv) Phloem parenchyma
(32) (i) Cardiac muscles (ii) Smooth muscles or unstriated muscles (iii) Striated muscles
(34) (b) Nervous tissue (c) Brain
(39) (i) Squamous epithelium (ii) Ciliated epithelium (iii) Cuboidal epithelium
(iv) columnar epithelium (v) Squamous epithelium (vi) Cuboidal epithelium
(40) (a) Xylem and phloem tissues (b) Cuboidal epithelium
(c) Unstriated muscular tissue (d) Cardiac muscles (e) Unstriated muscular tissue