



BIOLOGY

BOOKS - PRADEEP BIOLOGY (HINGLISH)

TISSUES

Ncert Questions

1. What is a tissue ?

2. What is the utility of tissues in multicellular

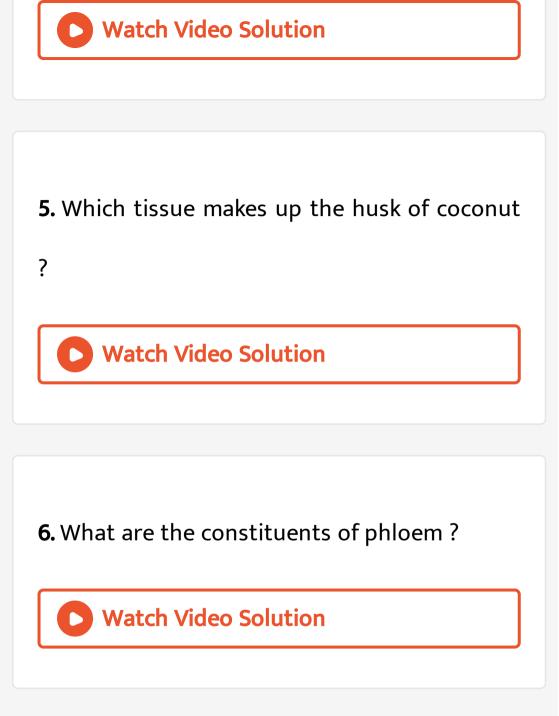
organisms?

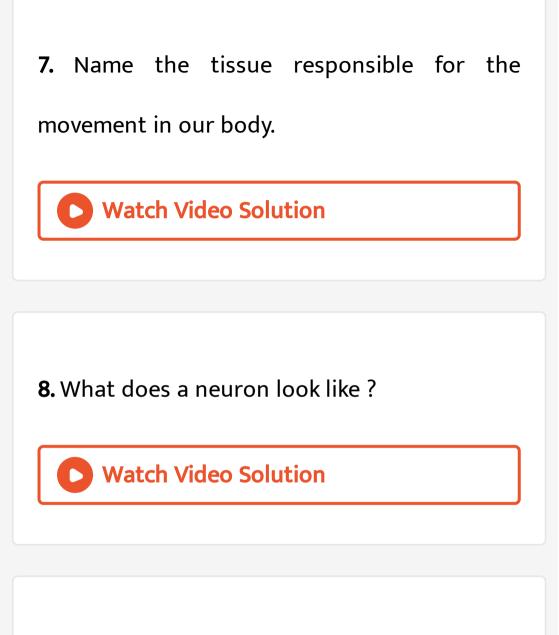


3. Name types of simple tissues.

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4. Where is apical meristem found ?





9. Give three features of cardiac muscles.

10. What are the functions of areolar tissue ?



Ncert Exercises

1. Define the term "tissue".

2. How many types of elements together make

up the xylem tissue ? Name them.



3. How are simple tissues different from

complex tissue in plants ?



4. Differentiate between Parenchyma,Collenchyma and Sclerenchyma on the basis oftheir cell wall.



5. What are the functions of the stomata ?



6. Diagrammatically show the difference in

three types of muscle fibres.

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7. What is the specific function of the cardiac

muscle?

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



9. Draw a labelled diagram of a neuron.



10. Name the following :

- (a) Tissue that forms inner lining of our mouth(b) Tissue that connects muscle to bone inhumans
- (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.



11. Identify the type of tissue in the following :

Skin, bark of tree, bone, lining of kidney tubule,

vascular bundle.



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



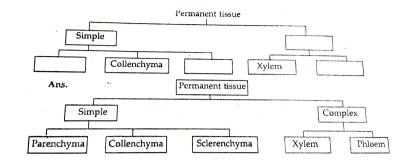
13. What is the role of epidermis in plants?



14. How does the cork act as a protective

tissue?

15. Complete the table



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Ncert Exampler Problems

1. Which of the following tissues has dead cells

- A. Parenchyma
- B. Sclerenchyma
- C. Collenchyma
- D. Epithelial tissue

Answer: B

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2. Find out incorrect sentence

A. Parenchymot	ous	tissue	have
intercellular spaces.			
B. Collenchymatous tissue are irrgularly			
thickened at corners			
C. Apical and	intercalar	y meris	stems are
permanent tissues			
D. Meristematic tissues, in its early stage,			

lack vacuoles

Answer: C

3. Girth of stem increases due to

A. Apical meristem

B. lateral meristem

C. Intercalary meristem

D. Vertical meristem

Answer: B

4. Which cell does not have performed cell wall

A. Tracheids

?

- B. Companion cells
- C. Sieve tubes
- D. Vessels

Answer: B

5. Intestine absorbs the digested food materials. What type of epithelial cells are respondible for that ?

A. Stratified squamous epithelium

B. Columnar epithelium

C. Spindle fibres

D. Cuboidal epithelium

Answer: B

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

Answer: C

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.

Answer: D



8. Which muscles act involuntarily ?

(i) Straited muscles (ii) Smooth muscle

(iii) Cardiac muscle (iv) Skeletal muscles

A. (i) and (ii)

B. (ii) and (iii)

C. (iii) and (iv)

D. (i) and (iv)

Answer: B

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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

Answer: C

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10. Which is not a function of epidermis ?

A. Protective from adverse condition

B. Gaseous exchange

C. Conduction of water

D. Transpiration

Answer: C

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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

Answer: C

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12. Cartilage is not found in

A. Nose

B. Ear

C. Kidney

D. larynx

Answer: C



13. Fats are stored in human body as

A. Cuboidal epithelium

B. Adipose tissue

C. Bones

D. Cartilage

Answer: B

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14. Bone matrix is rich in

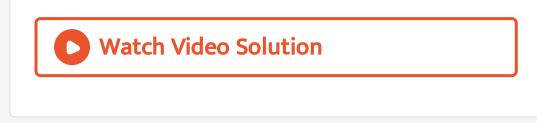
A. Fluoride and calcium

B. Calcium and phosphorus

C. Calcium and potassium

D. phosphorus and potassium





15. Contractile proteins are found in

A. Bones

B. Blood

C. Muscle

D. Cartilage

Answer: C



16. Voluntary muscles are found in

- A. Alimentary canal
- B. Limbs
- C. Muscles
- D. Bronchi of lungs

Answer: B

17. Nervous tissue is not found in

A. Brain

B. Spinal cord

C. Tendons

D. nerves

Answer: C

18. Nerve cell does not contain

A. Axon

- B. Nerve endings
- C. Tendons
- D. Dentrites

Answer: C



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

Answer: C

20. The musclar tissue which function throughout the life continuously without fatigue is

A. Skeletal muscle

B. Cardiac muscle

C. Smooth muscle

D. Voluntary muscle

Answer: B

21. Which of the following cells is found in the

cartilaginous tissue of the body?

A. Mast cells

B. Basophils

C. Osteocytes

D. Chondrocytes

Answer: D

22. The dead element present in the phloem is

A. Companion cells

B. phloem fibres

C. Phloem parenchyma

D. Sieve tube

Answer: B

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

Answer: A

24. In desert plants, rate of water loss gets

reduced due to the presence of

A. Cuticle

B. Stomata

C. lignin

D. Suberin

Answer: A

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 parechyma

C. parenchyma

D. Xylem vessels

Answer: D

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 pressure of

A. Cambium

B. Apical meristem

C. Lateral meristem

D. Intercalary meristem

Answer: D

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

Answer: C

28. Parenchyma cells are

A. Relatively unspecialised and thin walled

B. Thick walled and specialsed

C. Lignified

D. None of these

Answer: A

29. Flexibility in plants is due to

A. Collenchyma

B. Sclerenchyma

C. parenchyma

D. Chlorenchyma

Answer: A

30. Cork cells are made impervious to water

and gases by the presence of

A. Cellulose

B. Lipids

C. Suberin

D. Lignin

Answer: C

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

Answer: B

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

 Animals of colder region and fishes of cold water have thicker layer of subcutaneous fat.
 Describe why ?

2. Match the items of column A and B

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



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3. Match the items of colume A and column B.

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



4. If a potted plant is covered with a glass jar,water vapours appear on the wall of glass jar.Explain.



5. Name the different components of xylem

and draw a living component.

6. Draw and identify different elements of phloem

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7. 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

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

type.





9. Differentiate the following activities on the

basis of voluntary (V)

involuntary (IV) muscles.

(a) Jumping of frog

(b) Pumping of the heart

(c) Writing with hand

(d) Movement of chocolate in your intestine

10. 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

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11. Which structure protects the plant body

against the invasion of parasites ?



12. Fill in the blanks

(a) Cork cells possesses..... on their walls that

makes it impervious to gases and water.

.....have tubular cells with perforated walls and

are living in nature.

(c) Bone possesses a hard matrix composed

of..... And

13. Why is epidermis important for the plants?



14. Fill in the blanks :

(a).....are forms of complex tissue.

(b)have guard cells.

(c) Cells of cork contain a chemical called...... .

(d) Husl of cocunut is made of Tissue.

(e) and Both conducting tissues.

(f) gives flexibility in plants.

(g) Xylem transports and from soil.

(h) Phloem transportfromto other

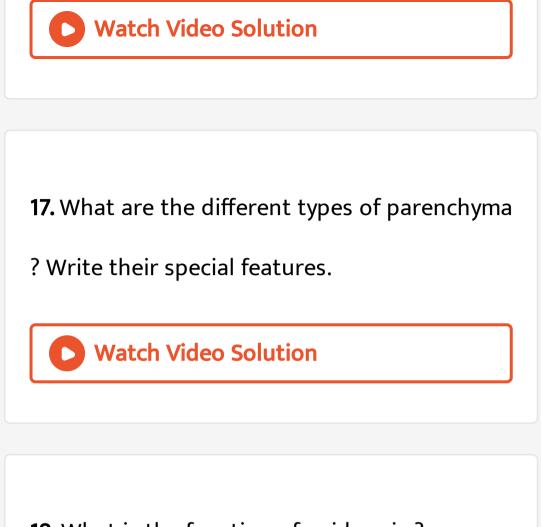
parts of the plant.

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15. MERISTEMATIC TISSUE

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16. Where are the intercalary meristem located.



18. What is the function of epidermis ?

19. What are the main functions of nervous tissue ?
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20. Give the example of some involuntary movements.



21. Where are fasts stored in out body?

22. Select the examples of -(a) Complex permanent tissue, (b) Simple permanent tissue, (c) connnective tissue, (d) Muscular tissue, and (e) Nervous tissue, from the given list :

Blood, phloem, muscle, Bons, Sclerenchyma,

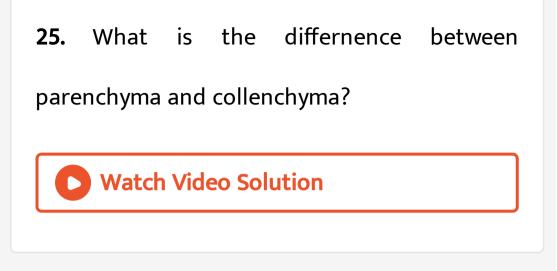
Neuron, Cartilage, Chlorenchyma



23. Name the tissue responsible for the Following functions in our body :
(a) Storage of fat , (b) Movement of limbs, (c) Movement of food in the alimentary canal
(d) Act as barrier to keep different body systems separate.

24. Difference between bone and cartilage is

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26. Give different components of phloem

tissue.



27. Name two complex permanent tissues in vascular plants. What are these commonly called ?



28. Name the animal tissue which act

(i) as protective covering of the body (ii) for

the transmission of messages.

29. Which animal epithelial tissue is called pavement epithelium ? Where is it located ?
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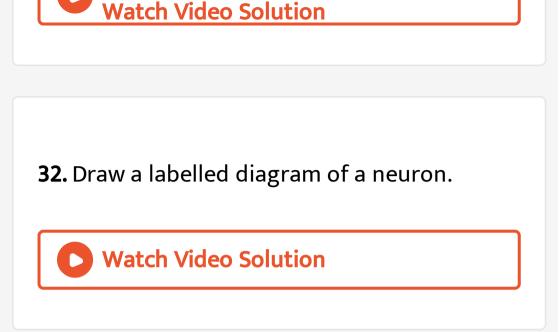
30. Name two components of blood and give

functions of blood plasma.

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31. What is lymph ? Give its components.





33. Name the conductive tissues of vascular plants which are responsible for conduction of water and inorganic solutes , and for the translocation of organic solutes respectively.



34. What is the main function fo collenchyma

and aerenchyma?

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35. Name the connective tissue which joins (a) bone to another bone, and (b) muscle to a bone.

36. Give main functioin of (a) Red blood corpuscles (b) White blood corpuscles.

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37. Name the skeletal tissue which is soft and elastic, has entirely organic matter and shows unidirectional growth .

(b) Name the skeletal tissue, which is hard and

tough , has both organic and inorganic matter

and shows bidireactional growth.





- **38.** Name the tissues which are responsible for the following :
- (i) bringing flexibility in plants (ii) making
- plants hard and stiff
- (iii) covering the animals body
- (iv) for making responses to stimuli



39. What is apical meristem ? Where is it located and what are its functions ?
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40. Where would you find striated muscle in

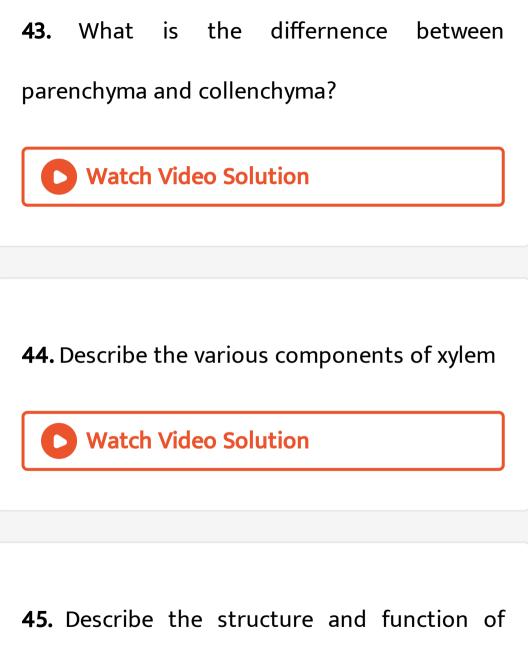
human body ? What is their function ?



41. Give an example of abundant fluid connective tissue. What is its composition ?
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42. Define mersitematic tissue ? Write down

characteristics of meristematic cells.



different types of epithelial tissues. Draw

diagram of each type of epithelial tissue.

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	Differentiate nent.	between	tendon	and	
Watch Video Solution					

47. Name the tissues which show the following

features :

1. Cells are living , cells show thickening,

provides mechanical support to plants

2. Cell are dead, cells show thickening, provides mechanical support to plants, made up of one type of cells

3. Cell are living , cells contain green coloured

chloroplast, possess intercellular spaces.

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48. Distinguish between the following :

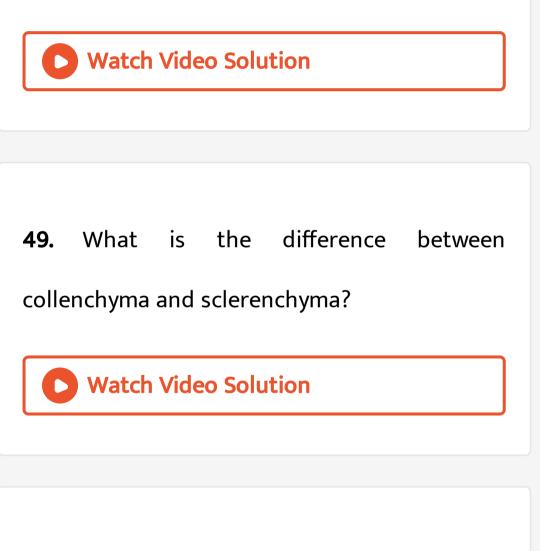
(a) Cartilage and bone on the basis of matrix.

(b) Blood and lymph on the basis of

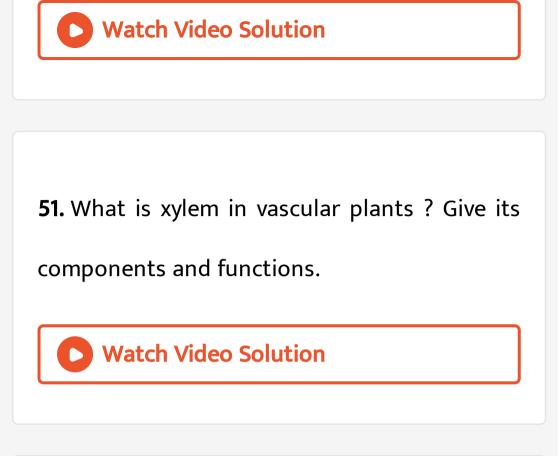
components.

(c) Simple tissues and complex tissues on the

basis of constitution of cells.



50. SIMPLE TISSUE-SCLERENCHYMA



52. What is phloem ? Write its components and functions.

53. Write brief note on-

(i) Adipose tissue

(ii) Areolar tissue.

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54. Describe structure and functions of bone.

55. Draw diagram of neuron and briefly write

about its components.

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56. Answer the following :

(i) Which skeletal tissue shows unidirectional growth ?

(ii) Which animal tissue is responsible for movement of body parts and locomotion ?

(iii) Which animal tissue is protective in

function ?



57. Write these similarities and three dissimilarities between ligaments and tendons.



58. Briefly explain the following :

(a) Ligament (b) Tendon (c) Neuron.



59. Give functions of the following :

(i) Blood platelets (ii) Sieve tubes (iii) Cardiac

muscle.

60. What is a cartilage ? How is it different

from a bone ?

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61. (a) Which parts of the body are composed of nerve cells?

(b) Write main function of neuron.

62. (i) Study the prepared slide of given plant tissue. Give one character that enables you to identify it as parenchyma.

(ii) What is its main function ?



63. Study the given slide of sclerenchyma plant

tissue and answer the following questions :

(i) Name the composition of lignin deposited

uniformly on its secondary walls.

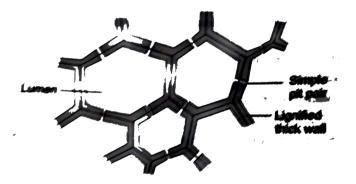
(ii) Name atleast twp plants whosesclerenchyma fibres are commericallyexploited.

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64. (a) You have been asked to study the given slide of plant tissue. Given two characters that enable you to identify it as collenchyma .

(b)What is its main function ?

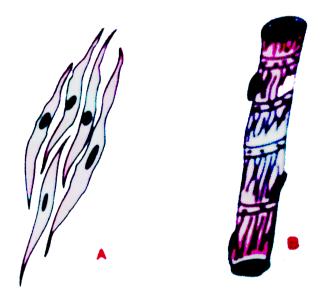
65. (a) Tarun was asked to draw a diagram of sclerenchyma as seen in longitudinal section and label it . His figure is given below. Point out the mistake in the figure.



(b) Are the cells of sclerenchyma live or dead ?



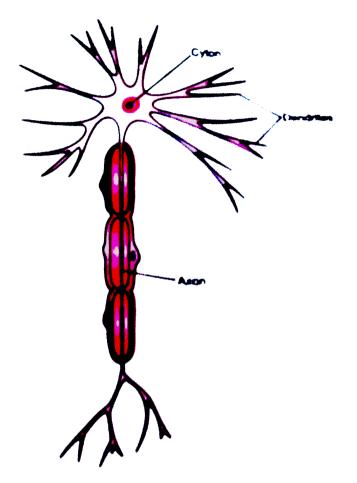
66. (a) Two slides were observed under the microscope for spot test as shown below. Given the correct identification of the two spots.



(b) Give one characteristic feature of each spot.



67. (a) A student observed a nerve cell and drawn the following figure. He did a mistake in labelling. Find out the mistake



(b) Where would you find nerve cells ? What is

the function of nerve cell ?

68. 1. List three parts of nerve cell.

2. In which part of nerve cell, Nissl's granules

present ? What is their composition ?

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69. (a) Observe slide of smooth muscle fibre under the microscope and draw its labelled diagram.

(b) Give name of atleast two structures where

smooth muscle fibres are present in humans.

70. (a) View prepared slide of cardiac musclefibres and draw its well labelled diagram.(b) Where are these fibres present ? Are thesevoluntary or involuntary in action ?

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71. Study the prepared slide of striated muscles fibres and answer the following questions :

(a) Are striated muscles voluntary orinvoluntary in action ?(b) Why are these called striated muscles

fibres ?

(c) Where are these present in human body?

Name any two regions/parts.

What is the function of striated muscles ?

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Long Answer Questions

 Differentiate between sclerenchyma and parenchyma tissues. Draw well labelled diagram.



2. Describe the structure and function of different types of epithelial tissues. Draw

diagram of each type of epithelial tissue.



3. Draw well labelled diagrams of various types

of muscles found in human body.

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4. 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.

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5. List the characteristics of cork. How are they

formed? Mention their role.

6. Why are xylem and phloem called complex tissues? How are they different from one other?



7. (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.

8. How plant tissues are different from animals

tissues ? Write the differnces in tabular form.

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9. Describe the different types of permanent

tissues.

10. With the help of neat labelled diagrams describe the various kind of connective tissues.



11. Describe the various types of protective tissues in plants

12. What are tissues ? Explain meristemmatic

tissues in plants.

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13. Describe the general characters ,

distribution and functions of the following :

(i) Parenchyma

(ii) Collenchyma

14. Explain the components and functions of

complex permanent tissues in vascular plants.



15. What is connective tissue ? List their types.

Explain tendons and ligaments.

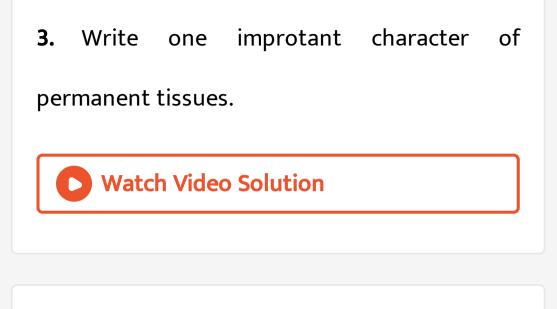
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Additional Questions Very Short Answer Questions 1. Name the tisseu responsible for growth in

plants .

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2. Name the three types of meristematic tissues .



4. Name three types of simple tissues of plants.



5. What chemical substance is deposited in the

secondary wall of sclerenchyma ?



6. Name the two types of cells found in sclerenchymatous tissues.



7. Name the componenets of xylem.

A. Tracheids, vessels, xylem parenchyma

and xylem fibres.

Β.

C.

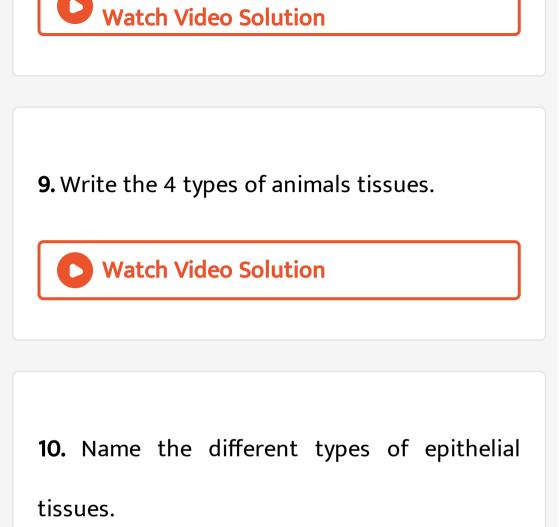
D.

Answer:

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8. What is the function of phloem.





11. Write the name fo most abundant muscular

tissue found in our body.

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12. Which tissue is called loose connective

tissue?



13. Which tissue is the principal component of

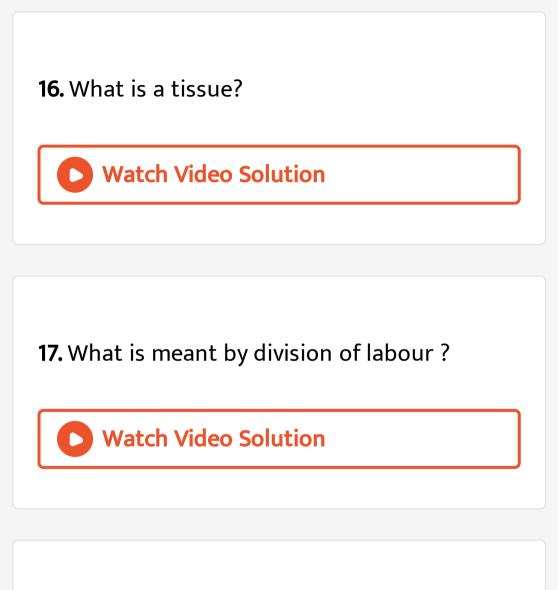
tendons and ligaments?

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14. Name the fat storing tisse in our body?

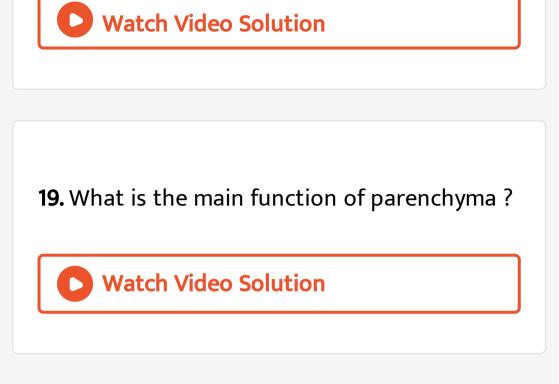
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15. Name the three parts fo a neuron.



18. Where do you find meristematic tissues in

plants?



20. Name the complex tissues in plants which help in the

(i) conduction of water and inorganic solutes.

(ii) translocation of organic solutes.







22. Which simple tissue is used for making ropes ?

23. What is the chief functions of collenchyma



?

24. Which cell is attached to the lateral side of

sieve tube in phloem?



25. Which of the four components of xylem is

living?

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26. Which animal tissue connects bone to

another bone ?

27. Which animal tissues connects muscles to

the bone ?

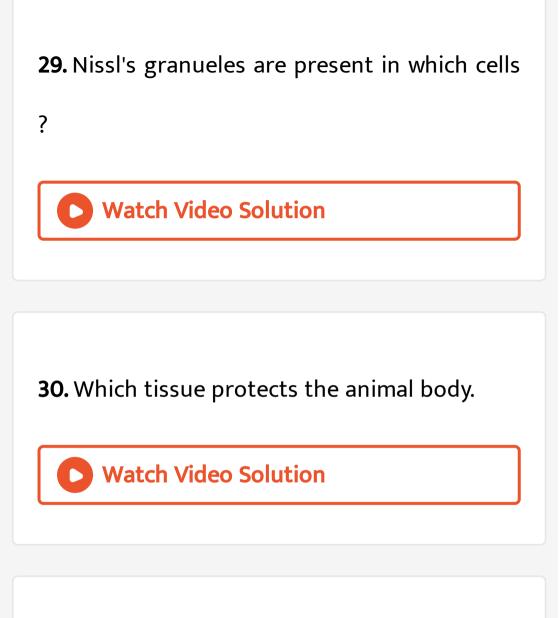
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28. Name the small gap between synaptic knob

of terminal branch of axon of one neuron and

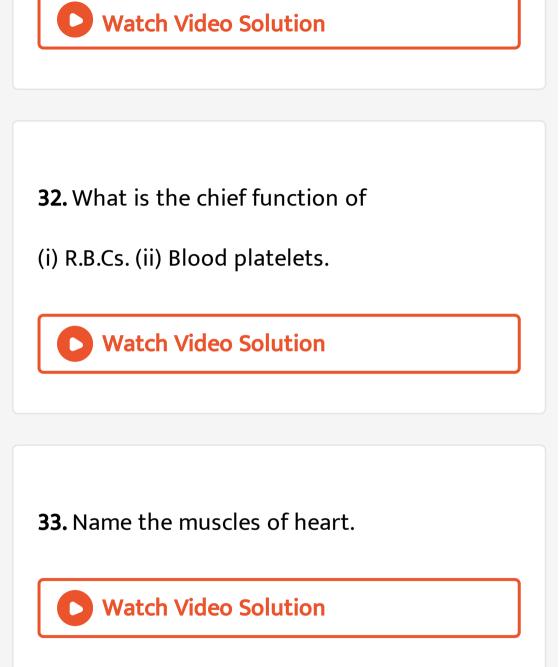
the dendron of other neuron.





31. Which type of connective tissue is present

in blubber of whale and hump of camel ?



34. Which muscle is commonly found in visceral organs ?
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35. Identify a plant tissue whose living cells form the mechanical tissue of actively growing organs and whose cell walls show cellulose thickenings often at the corners of cells.



36. An organism has actively dividing cells at its growing apices which continue to divide and add new cells throu throughout the life. To which group to belongs-plants or animals ?



37. Which plant tissue has cells which remain

in continuous state of divison or retain their

power of division ?

38. Name the animal tissue which occur as a

protective covering.

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39. Name the animal tissue which is commonly

called 'packaging tissue'.

40. Which chemical is deposited in the cell wall

of sclerenchyma?

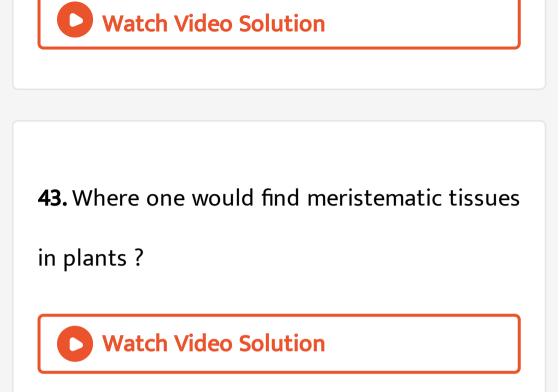
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41. What is meant by division of labour ?

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42. Name two types of skeletal tissues which

constitute the rigid skeleton in animals.



44. Which animal tissue is responsible for causing movement of body and locomotion of organisms ?

45. Name the most abundant vascular connective tissue found in animals.

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46. Which type of epithelium has cells which fit

together closely like the tiles on the floor ?

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Higher Order Thinking Skills

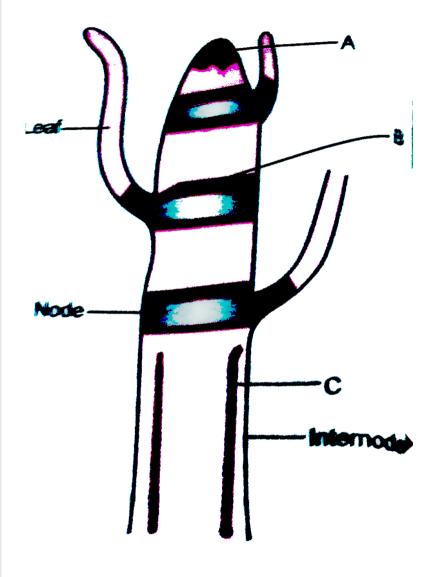
1. A student of standard IX gave the functions of the following cells/tissues wrongly. Correct these answer (a) Muscle cells : Carry messages (b) Vascular tissues in plants : transport oxygen, food, hormones and waste material. (c) Nerve cells : Contract and relax to cause movement (d) Blood : Conduct water, mineral and organic solutes from one part of the organism to other parts.



2. Observe the figure and answer the following questions :

- (a) What does the figure shows?
- (b) Label A, B and C
- (c) Write the functions of A and C
- (d) Which part is responsible for increase in

growth of internode.





3. What will happen if (a) The skin epithelium

is not stratified .

(b) Stratified squamous epithelium lines the

blood vessels.

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4. Give one reason why (a) The blood is called

connective tissue ?

(b) Muscles contain contractile proteins ? (c)

Muscles of heart are involuntary?



5. (a) Identify figures A and B (b) Which has living cells and which has dead cells ?
(c) which one is impermeable and does not allow substance to pass through it

(d) What is common between A and B.









6. What will happen if (i) Ligaments are over stretched ?

(ii) Apical meristem is cut or damaged ? (iii)

Striated muscles contract rapidly for a long

time ?

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7. What will happen if (i) bone is dipped in HCl

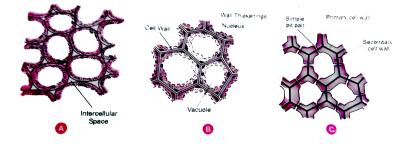
? (ii) bone is dried ? (iii) heparin is absent in

the blood ?



8. Given below are three figures A, B and C. (a) Identify figure A, B and C. (b) Which one is commerically exploited to get jute and hemp? (c) Which one is modified to store products? (d) Which one has deposition of lignin? (e) Which one of these provides both

mechanical strength and flexibility?





Analytical Questions With Answers

- **1.** (i) Which type of tissues is affected by HIV infection ?
- (ii) List any two precautios one should take to
- prevent spread of AIDS ?
- (iii) Is it necessary to isolate AIDS patients
- from healthy ones ? Comment.



2. (i) Which tissue is responsible for storage of fat in the body ?

(ii) How can we control obesity ?

(iii) What are the effects the morning walk and

regular physical exercise on obesity?

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3. (i) What happenes to the plants if their tips

are removed ?

(ii) What are meristems ?

(iii) How meristems are classified ?



- 4. (i) Why are only some parts of plants used
- for making ropes ?
- (ii) Cotton fibres are obtained from which part
- of cotton plant ?
- (iii) In which state of our country, jute growing
- is a major source of income.



Water hyacinth float on water surface.
 Explain.



6. (a) Among plant tissues, which one is the most simple and unspecialized primitive tissue. List one functions of this tissue.
(b) Does the above mentioned tissue has special types ? If yes, mention them in detail.

7. Which plant tissue is responsible for

providing mechanical support and how ?



8. Why are xylem and phloem called complex permanent tissue ? What are their chief constituents ? Also, mention their role.

9. (a) Which is the simplest kind of tissue in animals ? Name other animals tissues also.(b) List atleast three functions of this simplest animal tissue.

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10. (a) What are animal connectivetissue ? Give its types .

(b) What is the mena function of adipose tissue ? Where are such tissue found in human body ? (c) Tandons and ligaments belong ot which category of connective tissue ? Connective tissue ? Write differences between them.