Chapter 6: Plant and Animal Tissues B6

1. What is a tissue?

A group of cells which have a common origin, structure and function is called tissue.

2. Define an organ.

A group of tissues performing a particular function is called an organ.

3. What is an organ system?

A group of organs performing a set of functions is called an organ system.

4. Define histology.

The branch of biology which deals with the study of tissues and their organization is called histology.

5. How are plant tissues classified?

Plant tissues are classified into two groups on the basis of function into:

a) Meristematic tissues

b) Permanent tissues

6. What are meristematic tissues?

The tissues composed of cells which keep on dividing forming new cells are called meristematic tissues.

7. Where do meristematic tissues occur?

Meristematic tissues occur in all growing regions like root tip, stem apex and buds.

8. Mention the types of meristematic tissues & state their function

a) Apical meristem: They are located at the shoot tip which makes the plant, grow taller.

b) Lateral meristem: They add to girth (diameter) of the plant body.

c) inter-nodal meristem: They are found at the nodes between leaves and stem. It helps in branching.

9. Mention the features of meristematic tissues.

a) The cells have thin walls.

b) The cells divide actively and cause growth.

c) The cells are closely arranged without any inter cellular spaces in between.

d) The cells have a large nucleus but lacks chloroplasts.

e) Vacuoles are either small or absent.

10. State the functions of meristematic tissues.

a) Apical meristems make the plant to grow taller.

b) Lateral meristems add girth to the plant body.

c) Meristematic cells in vascular bundles of roots and stems bring about growth in thickness.

d) The meristems found in nodes help in branching.

11. What are permanent tissues?

The tissues formed by mature or specialized cells are called permanent tissues.

12. Mention the features of permanent tissues.

a) Permanent tissues are formed by mature or specialized cells.
b) They have cell wall composed of cellulose in addition to hemicelluloses, pectin and lignin.
c) They contain well developed plastids and other cell organelles.
d) Vacuoles are large and prominent.
e) Nucleus may be present or absent at maturity in certain types.

13. Mention the types of permanent tissues.

a) Simple tissue b) Complex tissue

14. What is simple permanent tissue?

Tissues in which the cells are of the same kind and performing common function are called simple permanent tissue.

15. Mention the types of simple permanent tissue.

a) Parenchyma b) Collenchyma c) Sclerenchyma

16. What is parenchyma?

Parenchyma is a simple permanent tissue in which is found in the soft parts of plants body.

17. Mention the characteristics of parenchyma.

a) The cells of parenchyma tissue are composed of thin walled living cells.
b) They are least specialized.
c) The cells may be round, elongated, polygonal or irregular.
d) The cells are loosely arranged.
e) They contain large amount of food material.

18. Mention the functions of parenchyma.

Parenchyma cells stores large amounts of food materials.

If parenchyma cells contain chloroplasts, it takes part in photosynthesis.

They help the leaves of aquatic plants to float.

19. What is Chlorenchyma?

Parenchyma cells containing chloroplasts are called Chlorenchyma. It takes part in photosynthesis.

20. Mention the characteristics of Collenchyma.

a) Collenchyma contains living cells and is capable of cell division.
b) The cells are closely arranged without any spaces in between.
c) They are thick walled at corners where the cells join.
d) The cell wall is made up of hemicelluloses or pectin.

21. Where do collenchyma tissues occur?

Collenchyma tissues occur in pedicel and petiole of leaf.

22. Mention the differences between parenchyma and collenchyma

Parenchyma	Collenchyma
Parenchyma cells are loosely arranged	Collenchyma cells are closely packed
They have thin cell wall.	They are thick walled at the corners

23. Mention the characteristics of Sclerenchyma.

a) The cells of Sclerenchyma consist of thick, elongated cells, which are dead at maturity.
b) The living cells of Sclerenchyma get deposited by lignin.
c) They lose nucleus and protoplasm at maturity.

24. What are fibres and sclereids?

Sclerenchyma cells consisting of elongated, thread like thick walled cells are called fibres.

Sclerenchyma cells consisting of hard cells found in group and having more lignin are called sclereids. The cells of sclereids are isodiametric or columnar or bone shaped or star shaped

25. Why are fibres used in making gunny bags and ropes?

Sclerenchyma fibres are flexible and elastic; hence they are used in coir industries to make gunny bags and ropes.

26. Why sclereids are commonly called stone cells?

Sclereids are hard cells found in groups and have more lignin, hence they are commonly called stone cells.

27. Where are sclereids found?

Sclereids are found in fruit wall and seed coat.

28. Mention the differences between collenchyma and Sclerenchyma

Collenchyma	Sclerenchyma
It contains living cells	It contains dead cells
It are capable of cell division	They are not capable of cell division

29. What is complex permanent tissue?

The tissues that comprise of both living and non-living cells are called complex permanent tissues. Ex: Xylem, phloem

30. What is xylem?

Xylem is a vascular tissue which transports water and mineral absorbed by the roots to all the parts of the plant.

31. Name the four types of xylem cells. OR what is xylem composed of?

Xylem tissue is composed of:

a) xylem parenchyma b) xylem fibres c) xylem vessels and d) tracheids.

32. What are xylem vessels and tracheids?

Xylem vessels consist of series of elongated dead cells joined together forming end to end tube like structure for conduction of water and salts.

Tracheids are short structures usually found at the tip of the leaf.

33. What is phloem?

Phloem is a complex tissue which conducts food to different parts of the plant.

34. What is phloem composed of?

Phloem is composed of four types of cells.

a) sieve tubes b) companion cells c) phloem fibres d) phloem parenchyma

35. What are sieve tubes?

Sieve tubes comprise of longitudinally arranged cells. The cells are joined end to end in a series. At maturity the cells lose the nucleus.

36. What is sieve plate?

Sieve plate is a plate like structure with number of pores is present in between the two cells.

37. What are companion cells?

Companion cells are living cells that are closely associated with sieve tubes. They control the passage of food through phloem.

38. State the function of a) sieve tubes b) sieve plate c) companion cells d) phloem fibres.

a) Sieve tubes: They play an important role in the conduction of food.

b) Sieve plate: It allows the food to pass through the pores.

c) Companion cells: They control the passage of food through the phloem.

d) Phloem fibres: They provide tensile strength to the plant body.

39. Why are xylem and phloem called vascular bundles?

Since xylem and phloem occur together they are called vascular bundles.

40. Mention the differences between xylem and phloem.

Xylem	Phloem
1) It conducts water and minerals from roots to other parts of the plant body	**1) It transports food from leaves to other regions.**
2) It consists of dead elements	**2) It consists of living elements**

41. What is epidermal tissue?

Epidermal tissue is a simple permanent tissue which covers all parts of plant like stem, leaves flowers, fruits, seeds and roots. It is a protective tissue.

42. Mention the characteristics of epidermal tissue.

a) Epidermal tissue forms the covering of most parts of plant like stem, leaves flowers, fruits, seeds and roots.

b) It is made up of parenchyma cells.

c) It is living tissue.

d) It is one cell thick.

43. State the function of a) cuticle b) epidermis c) epidermis of roots

a) Cuticle: In terrestrial plants, it prevents water loss. In aquatic plants, it prevents decaying of tissues of leaves and other parts.

b) Epidermis: It protects the inner tissues of plants.

c) Epidermis of root: It absorbs water and nutrients from the soil.

44. What is cuticle?

A waxy coating secreted by come plants is called cuticle.

45. Give reason: In aquatic plants like lotus, the cuticle is thick.

In aquatic plants like lotus, the cuticle prevents decaying of tissues of leaves and other parts.

46. What are stomata?

The tiny pores present in the epidermis of the leaves are called stomata.

47. What is the function of stomata?

Stomata regulate the passage of gasses such as oxygen and carbon dioxide and moisture into and out of the plant.

ANIMAL TISSUES

48. How are animal tissues classified?

a) Epithelial tissue b) Muscular tissue c) Connective tissue d) Nervous tissue

49. What is epithelial tissue?

Epithelial tissue is a simple tissue that covers the external and internal body surface.

50. What is Squamous epithelium?

The epithelial tissues in which the cells are thin, flat, plate like and polygonal are called Squamous epithelium.

It occurs in the alveoli of lungs, oesophagus, blood vessels, capillaries and chambers of heart.

51. When Squamous epithelium is called endothelium?

When epithelium is found lining from inside, it is called endothelium.

52. Give reason: Squamous epithelium is called 'pavement epithelium'

Squamous epithelium look like the tiles on a floor without any space and tightly packed. Hence Squamous epithelium is referred to as pavement epithelium.

53. State the function of Squamous epithelium.

Squamous epithelium permits materials to diffuse through it.

54. What is columnar epithelium? Where do they occur?

The epithelial tissues composed of tall, narrow and column or pillar like cells are called columnar epithelium.

They are found in the inner lining of stomach, small intestine, pharynx, larynx and oviducts.

55. What is cuboidal epithelium? Where do they occur?

The epithelium that have cube shaped cells are called cuboidal epithelium.

They are found in the lining of many ducts such as pancreatic duct, salivary duct and sweat ducts.

56. What is the function of cuboidal epithelium?

Cuboidal epithelium in glands help in secretion. For example salivary gland and thyroid gland.

57. What is ciliated epithelium?

Columnar epithelial cells containing cilia on their free surface are called ciliated epithelium.

58. State the functions of epithelium.

a) Epithelium forms a thick tough barrier. It protects the underlying tissues in the skin.
b) Epithelium of the skin helps in maintaining a constant body temperature.
c) Epithelium is sense organs, contain receptor cells.
d) Ciliated epithelium helps in the movement of materials.
e) Epithelium also helps in absorption of nutrients and in excretion.

59. What is muscular tissue?

The tissues that are made up of muscle cells which help in the movement of the body are called muscular tissue.

60. State the function of muscle fibres.

Muscle fibres or myofibres are specialized cells capable of contraction and relaxation that is responsible for movement of limbs, bending of the body, movement of internal organs like heart, stomach and alimentary canal.

61. Mention the types of muscular tissue.

Based on structure, function and location, muscular tissue is divided into:

a) Striped muscles b) Unstriped muscles

c) Cardiac muscles

62. What are striped muscles? State their function.

The muscles that are made up elongated, unbranched cylindrical fibres with stripes or striations or cross bands are called striped muscles.

They are voluntary muscles and help in locomotion.

63. Give reason: Striped muscles are called 'skeletal muscles'.

Striped muscles are usually attached to the bones. Hence they are called skeletal muscles.

64. What are unstriped muscles? Give example.

The muscles that are made up of spindle shaped, elongated muscle fibres without stripes (cross bands) are called unstriped muscles.

They are also called smooth muscles. They are involuntary muscles.

Example: The peristaltic movements of oesophagus, intestine and stomach are due to unstriped muscles. They are also found in kidneys, blood vessels and glands.

65. What are voluntary and involuntary muscles?

The muscles that are under the will of the organism are called voluntary muscles. The muscles that are not under the will of the organism are called involuntary muscles.

66. Write the structural and functional differences between striped and unstriped muscles.

Striped muscles	Unstriped muscles
1) They are cylindrical in shape	**1) They are spindle shaped**
2) They have stripes or striations	**2) They do not have stripes or striations**
3) They are voluntary muscles	**3) They are involuntary muscles**
4) They help in locomotion	**4) They help in peristaltic movement of oesophagus, small intestine etc.**

67. Mention the characteristics of cardiac muscles.

a) Cardiac muscles are composed of branched fibres that have stripes or bands.
b) The branches are connected with one another in a cris-cross form.
c) They are involuntary muscles
d) They do not fatigue easily.
e) They are found only in the heart.

68. State the function of cardiac muscles.

Cardiac muscles are responsible for the contraction and relaxation of the heart. It makes the heart beat continuously throughout one's life.

69. How is the heart able to function continuously without any rest in between?

The muscles of the heart are made up of cardiac muscles which do not fatigue easily. Hence they are able to function continuously without rest.

70. Name the muscles that help in the following muscular movement.

Walking – Locomotor
Respiration – movement of diaphragm
Speaking – muscles of vocal cord
Expression of emotions – facial muscles
Propulsion of food in alimentary canal – Smooth muscles
Pumping of blood – cardiac muscles
Urination – contraction of smooth muscles of the urinary bladder.

71. What are connective tissues?

The tissues that connect various other tissues of the body and provide support are called connective tissues. They consist of cells, fibres enclosed in a ground substance called matrix.

72. Mention the types of connective tissues.

On the basis of the nature of the matrix, connective tissues are classified into:

a) Loose connective tissues

b) Dense connective tissues

c) Fluid connective tissues.

73. Why connective tissues are called 'binding tissues'?

Since connective tissues connects or binds other tissues, it is also called binding tissue.

74. What are loose connective tissues? Mention their types.

The tissues in which the fibres in the matrix are loosely arranged is called loose connective tissues.

They are of three types. a) areolar tissue b) adipose tissue c) reticular tissue

75. What is areolar tissue? Where are they found?

The tissues that are found below the skin in which the fibres are loosely connected and having air spaces are called areolar tissue.

They are found in both dermis and sub-cutaneous layers of the skin. It is also found in and around mucous membrane and around blood vessels and nerves.

76. Name the three types of fibres found in the areolar tissue.

a) White fibres or collagen fibres found in groups.

b) Yellow fibres or elastic fibres found singly.

c) Reticular fibres, forming a network.

77. Name the different types of cells found in areolar tissue and state their function.

Fibroblasts: They are large, flat, highly branched. They secrete and maintain fibres.

Plasma cells: They are oval in shape and have small nucleus. They produce antibodies.

Macrophages: They are amoeboid in shape. They defend against micro-organisms. They ingest the micro-organisms.

Mast cells: They are large cells having a spherical nucleus with granular cytoplasm. They are associated with secretion of substances like serotonin, heparin and histamine.

78. Why are areolar tissues called so?

Areolar tissues have air spaces in between the fibres, hence it is referred to as areolar tissue.

79. How does areolar tissue help in body defence?

Cells of areolar tissues produce antibodies and also defend against micro-organisms. They also ingest the micro-organisms. Hence they help in body defence.

80. What is adipose tissue?

The tissues that have closely packed fat cells are called adipose tissue.

81. State the functions of adipose tissues.

Adipose tissues stores nutrients and used as and when the body requires.

It provides insulation against cold.

It protects certain organs by acting a s shock absorbers..

82. State the function of reticular tissue.

Reticular tissue provides frame work for organs like liver, spleen, bone marrow, tonsils and mucous membrane, lining of the respiratory tract and alimentary canal.

83. What are tendons?

Tendons are cord like, inelastic structures that joins the skeletal muscles to bones or cartilage.

84. What are ligaments?

Ligaments are elastic fibres which connect bones to other bones. They help in movement of bones.

85. Mention the differences between tendons and ligaments.

Tendons	Ligaments
They are inelastic	**They are elastic**
They join muscles to bones or cartilage	**They join bones with other bones**

86. What are dense connective tissues?

The connective tissues consisting of hard matrix are called dense connective tissues.

87. State the functions of dense connective tissues.

They form the skeletal system of the body providing an internal supporting frame work.

They enclose the internal organs. Ex: Skull protects brain, eyes, ears, nose.

88. Name the organs protected by the following:

a) Skull – Brain, eyes, ears and nose

b) Ribcage – heart and lungs

c) Vertebral column – spinal cord

d) Pelvic girdle – organs of digestion, excretion, reproduction and other glands.

89. What is cartilage tissue?

Cartilage is a specialized connective tissue which is non-porous, elastic and flexible.

90. Mention the features of cartilage tissue.

a) Cartilage consists of translucent or glassy matrix composed of chondrin.

b) It has cells called chondrocytes.

c) The space in chondrocytes is called lacunae.

d) Cells may be single or in groups of 2 or 3.

91. State the function of chondrocytes.

Chondrocytes secrete the matrix.

92. Give reason: White and yellow fibres in cartilage are not easily visible.

The refractive index of the fibres and the matrix are same. Hence they are not easily visible.

93. What is perichondrium? What is its function?

The cartilage is externally surrounded by a connective tissue layer called perichondrium. Its function is to provide nutrients and oxygen to chondrocytes.

94. Where are the cartilage found in the body?

a) Cartilage is present in C shaped rings in the trachea, bronchi.

b) It is present in larynx, epiglottis, walls of Eustachian tube and pinna.

c) It is present in between the vertebrae in the vertebral column.

95. What is the function of cartilage in between vertebrae in the vertebral column?

The cartilage present between the vertebrae in the vertebral column helps in bending and stretching movements.

96. What is bone tissue?

Bone is strong, non-flexible, porous connective tissue. The matrix of a bone consists of collagen fibres, proteins, inorganic salts like calcium phosphate, chlorides of potassium, sodium and magnesium.

97. What is bone marrow?

The long and strong bones of limbs are filled with a fluid called bone marrow. The function of bone marrow is to produce blood cells.

98. Explain the Haversian system of bone.

a) The structural unit of bone tissue is called Haversian system.

b) It consists of a central Haversian canal containing blood vessels and nerves.

c) It is surrounded by a matrix called ossein.

d) Ossein contains collagen fibres and mineral salts chiefly calcium phosphates.

e) Ossein is arranged in the form of concentric layers called lamellae.

f) There are fluid filled spaces between lamellae called lacunae.

g) There are fine canals interconnecting the lamellae called canaliculi.

h) The osteocytes are interconnected by protoplasmic strands extending through the canaliculi.

i) Two adjoining Haversian canals a connected by transverse canals called Volkmann's canal.

99. What are these?

a) Ossein: The matrix surrounding the Haversian canal is called Ossein.

b) Lamellae: The concentric layers of Ossein are called lamellae.

c) Lacunae: the fluid filled spaces between lamellae are called Lacunae.

d) Canaliculi: The fine canals interconnecting adjoining lacunae are called Canaliculi.

e) Volkmann's Canal: The transverse canals connecting two Haversian canals is called Volkmann's canal.

100. Differentiate between cartilage and bone

Cartilage	Bone
1. It is soft & flexible	**1. It is hard & rigid**
2. It is non-porous	**2. It is porous**
3. Matrix consists of collagen fibres	**3. Matrix consists of collagen fibres, proteins and inorganic salts.**
4. There is no direct supply of blood to	**4. There is a direct supply of blood to**

cartilage.	**the bones.**

101. Name the fluid connective tissues.

Blood and lymph are the fluid connective tissues.

102. What is blood plasma?

The fluid matrix of blood tissue is called blood plasma.

103. Name the constituents of blood.

Blood consists of blood cells like Red Blood Cells, White Blood Cells & platelets.

104. Write short notes on Red Blood Cells.

a) Red Blood Cells are involved in supplying of oxygen to every cell in the body.
b) They remove carbon di-oxide from the cells and transport it to lungs.
c) The number of RBC's vary from 4.5 to 5.5 million cells/cubic mm of blood.
d) They are circular, biconcave discs.
e) They have a life span of 100 to 120 days.
f) They originate in the bone marrow.
g) They enclose an iron containing pigment called haemoglobin.
h) It helps in the transport of oxygen.

105. State the function of a) RBC b) WBC c) Platelets

a) RBC: They supply oxygen to cells of the body and remove carbon di-oxide from the cells.

b) WBC: They help in body defence.

c) Platelets: They help in clotting of blood.

106. What is lymph? What are lymph nodes?

Lymph is a colourless fluid that has been filtered out of the blood capillaries. Lymph consists of white blood cells.

Lymph enters a set of capillaries which form the lymph glands or lymph nodes.

107. Mention the functions of lymph.

a) Lymph produces antibodies that form a part of immune system
b) It contains a type of white blood cells or phagocytes which remove bacteria and foreign bodies from the tissues.

108. State one function of phagocytes present in lymph tissue.

Phagocytes remove bacteria and foreign bodies from the tissues.

109. What is a nerve cell or neuron?

Neuron is the structural and functional unit of nervous tissue.

110. State any one function of nerve tissue.

a) It responds to external & internal stimuli of the body.
b) Nervous tissue transmits nerve impulses from all parts of the body to nerve centers.

111. Briefly explain the structure of neuron.

Neurons are the structural and functional unit of nervous tissue.

Each neuron has a cyton or cell body consisting of central nucleus and cytoplasm.

Short projections arise from the cell body called dendrites.

A long, cylindrical fibre called axon extends from the cell body. The axon is covered by a fatty sheath called Myelin Sheath. The axon ends in branches.

112. What are dendrites?

The short projections arising from the cell body is called dendrites.

113. What is axon?

An axon is a single long, cylindrical fibre extending from a cell body

114. What are telodendrons?

The axon ends in a bunch of branches called telodendrons.

115. What is Myelin sheath?

They fatty sheath covering on the axon is called Myelin sheath.

116. Draw a neat diagram showing the structure of a neuron and label the parts.

Fill in the blanks:

1. The branch of biology which deals with the study of tissues and their organization is called **histology**.
2. Plants exhibit only **tissue** level of organisation.
3. The tissues which are meant only for growth is **meristematic tissue**.
4. The tissues composed on cells which divide forming new cells are **meristematic tissues**.
5. The meristems which help in branching are **nodal meristems**.

6. The meristems which help in increasing the girth of the plant is **lateral meristems**,
7. The tissues formed by mature or specialised cells are called **Permanent tissues**.
8. The tissue found in soft parts of plant like root, stem, and leaves is **Parenchyma**.
9. Parenchyma containing chloroplasts are called **Chlorenchyma**.
10. Parenchyma with large inter-cellular spaces filled with air is called **aerenchyma**.
11. The cell wall of collenchyma is made up of **hemicelluloses or pectin**.
12. Collenchyma generally occurs in **pedicel or petiole**.
13. The hard shell of coconut is composed of **Sclerenchyma**.
14. The cells of **Sclerenchyma** lose nucleus and protoplasm at maturity.
15. The tissues used in coir industries to make gunny bags and ropes are **Sclerenchyma (fibres)**.
16. Sclereids are referred to as **stone** cells.
17. The type of permanent tissue found in fruit wall and seed coat is **Sclerenchyma**.
18. The cells closely associated with sieve tubes are **companion cells**.
19. The outermost covering of the plant body called **epidermal tissue**.
20. The tissue referred to as 'skin of the plant body' is **epidermal tissue**.
21. The waxy coating on the plant body is called **cuticle**.
22. The openings in the epidermis of plants are called **stomata**.
23. The tissues found in the inner and outer lining of the body are called **epithelial tissues**.
24. The epithelium consisting of flat plate like cells is called **Squamous epithelium**.
25. The epithelium referred to as pavement epithelium is **Squamous epithelium**.
26. The type of epithelium found in the alveoli of lungs, oesophagus, blood vessels e**tc is Squamous epithelium**.
27. The type of epithelium referred to as endothelium is **Squamous epithelium**.
28. The epithelium containing elongated, tall, pillar like cells is called **columnar epithelium**,
29. The type of epithelium found in the inner lining of stomach, small intestine, pharynx, larynx and oviducts is **columnar epithelium**.
30. The epithelium consisting of cube shaped cells is **cuboidal epithelium**.
31. The type of epithelium found in the lining of ducts is **cuboidal epithelium**.
32. The type of epithelium found in the lining of salivary glands is **cuboidal epithelium**.
33. The type of epithelium found in the lining of ducts is **cuboidal epithelium**.
34. The type of epithelium which helps in secretion is **cuboidal epithelium**.
35. The type of epithelium which have cilia on their free surface is **ciliated epithelium**.
36. The muscles that are elongated, cylindrical and unbranched are called **striped muscles**.
37. The muscles that are elongated, spindle shaped are called **unstriped muscles**.
38. The muscles that are referred to as skeletal muscles are **striped muscles**.
39. The muscles that are under the control of the organism are called **voluntary muscles**.
40. The muscles that are not under the control of the organism are called **involuntary muscles**.
41. The muscles that are found only in the heart are **cardiac muscles**.
42. The muscles that are involved in the expression of emotions are **facial muscles**.
43. The muscles that are involved when we speak are **muscles of vocal cord**.
44. The muscles that are involved in propulsion of food from alimentary canal are **smooth muscles**.

45. The muscles that are involved in pumping of heart are **cardiac muscles**.
46. The muscles that are involved during urination are smooth muscles of urinary bladder.
47. The tissues which connect various other tissues of the body and provide support are called **connective tissues**.
48. Connective tissues are also called **binding** tissues.
49. The tissues in which the fibres in the matrix are loosely arranged is called loose **connective tissue**.
50. The tissue that is found in the dermis and sub-cutaneous layers of the skin are **areolar** tissue.
51. The function of fibroblasts is to **secrete and maintain fibres**.
52. The function of plasma cells is to **produce antibodies**.
53. The function of macrophages is to **ingest the micro-organisms**.
54. Secretion of Serotonin, heparin and histamine is the function of **mast cells**.
55. The tissue that consists of closely packed fat cells is **adipose tissue**.
56. The tissues which act as shock absorber is **adipose tissue**.
57. The tissue which provides insulation against cold is **adipose tissue**.
58. The tissues which connect muscles to bones or cartilage are **tendons**.
59. The tissues which connect one bone to another is called **ligament**.
60. The tissue which helps in movement of bones is **ligament**.
61. Connective tissues consisting of hard matrix are called **dense connective tissue**.
62. Brain, ears, eyes, nose and other organs of face are protected by **skull**.
63. Heart and lungs are protected by **ribcage**.
64. Spinal cord is protected by vertebral column.
65. The organs of digestion, excretion and reproduction are protected by **pelvic girdle**.
66. The matrix of cartilage is secreted by **chondrocytes**.
67. Cartilage is externally surrounded by a connective tissue called **perichondrium**.
68. The C shaped ring of trachea and bronchi are made of **cartilage**.
69. **Cartilage** brings about bending and stretching movements of vertebral column.
70. The long and strong bones of limbs are filled with a fluid called **bone marrow**.
71. The function of bone marrow is to produce **blood cells**.
72. The structural unit of bone tissue is **Haversian system**.
73. The Haversian system is surrounded by a matrix called **Ossein**.
74. Ossein arranged in the form of concentric layers is called **lamellae**.
75. Between lamellae, the fluid filled spaces are called **lacunae**.
76. Adjoining lamellae are interconnected by fine canals called **canaliculi**.
77. Adjoining Haversian canals are connected by transverse canals called **Volkmamn's canal**.
78. Smallest bone in the human body is in the **middle ear**.
79. 85% of inorganic component of the bone is **calcium phosphate**.
80. Blood is a **connective** tissue.
81. **Blood and lymph** are fluid connective tissues.
82. The matrix of blood is called **plasma**.
83. The number of RBCs varies from **4.5 to 5.5 million** cells/cubic mm of blood.
84. The lifespan of RBC is **100 to 120** days.

85. The number of WBCs varies from **6000 to 10,000** cells/cubic mm of blood.
86. The number of platelets in a healthy human adult is **2,50,000** in $1cm^3$ of blood.
87. The function of platelets is to help in **clotting of blood**.
88. There is absence of **RBC** in lymph.
89. Lymph flows through a set of capillaries called **lymphatic** capillaries.
90. The structural and functional unit of nerve tissue is **neuron**.
91. The short projections arising from the cell body of neuron are called **dendrites**.
92. The long extension of the cell body of the neuron is called **axon**.
93. The axon ends in a bunch of branches called **telodendrons**.
94. The axon is covered by a **fatty** sheath called **Myelin Sheath**.
95. The fastest nerve impulse in humans travel at **eight metres per second**.