



INDIAN SCHOOL AL WADI AL KABIR

CLASS: IX	DEPARTMENT OF SCIENCE (2020 – 2021) SUBJECT : BIOLOGY	DATE OF COMPLETION: 29.11.2020
WORKSHEET NO: 4 WITH ANSWERS	TOPIC: TISSUES	A4 FILE FORMAT (PORTFOLIO)
CLASS & SEC:	NAME OF THE STUDENT:	ROLL NO.

I OBJECTIVE TYPE QUESTIONS

Ia. Fill in the blanks: -

1. Cambium is an example for_____.
2. _____ is an example for a dead simple permanent tissue.
3. The vascular tissue that conducts food in plants is _____.
4. _____ is a striated and involuntary muscle.
5. The matrix is fluid in connective tissue _____

Ib. State whether the following statements are true or false: -

6. Meristematic cells are small with large central vacuoles _____
7. Nerve cells are also known as neurons_____
8. Connective tissue is separated from the underlying tissue by extra cellular basement material _____
9. Skeletal muscles are involuntary in action and are multinucleated_____
10. Xylem parenchyma is the only living component of xylem_____

Ic. Multiple choice Questions: -

11. Desert plants consist of a thick waxy coating made of:
(a) Lignin (b) Suberin (c) Cutin (d) Pectin
12. The oesophagus and lining of mouth are covered with:
(a) Squamous epithelium (b) Columnar epithelium (c)Cuboidal epithelium (d)Connective tissue
13. Two bones are connected together by:
(a) Tendons (b) Ligaments (c) Plasma (d) Cartilage

14. The fat storing connective tissue present under skin is:

- (a) Areolar (b) Adipose (c) Adrenals (d) Cartilage

15. The only dead cell component of phloem is:

- (a) Fibre (b) Sieve cell (c) Tracheid (d) Companion cell

Id. 16. Match the statements in column A with those in column B:

Column A	Column B
1. Apical meristem	(a) Base of leaf stalk
2. Intercalary meristem	(b) Lateral conduction
3. Sieve tube	(c) Root tips
4. Xylem Parenchyma	(d) Uneven thickening
5. Collenchyma	(e) Companion cell

II. Assertion & Reasoning

A) If both, Assertion and Reason are true and the Reason is the correct explanation of the Assertion.

B) If both, Assertion and Reason are true but Reason is not a correct explanation of the Assertion.

C) If Assertion is true but the Reason is false.

D) If both, Assertion and Reason are false.

17. Assertion: Aquatic plants are with parenchyma cells having large air cavities.

Reason: They help in the transport of nutrients

18. Assertion: Bone is a connective tissue which is very hard and rigid.

Reason: The matrix consists of calcium and phosphate

III. VERY SHORT ANSWER TYPE QUESTIONS CARRYING 1 MARK EACH

19. State one function of parenchyma.

20. Where is apical meristem found?

21. Name the tissue present in brain.

22. Give any two characteristic features of meristem.

23. What is the function of phloem?

III. SHORT ANSWER TYPE QUESTIONS CARRYING 3 MARKS EACH

24. Tabulate the differences between three types of muscles.

25. Give a brief account of epithelial tissue.

26. (a) Name the different components present in phloem
(b) Draw and label the components of phloem
27. (a) What type of tissue is found at the shoot apex?
(b) Give the special features of the tissue
28. Differentiate between parenchyma, collenchyma and sclerenchyma on the basis of cell wall.
29. Animals of colder regions and fishes of cold water have thicker layer of subcutaneous fat. Describe why?
30. If a potted plant is covered with a glass jar, water vapours appear on the wall of glass jar. Explain.
31. Water hyacinth floats on water surface. Explain.
32. Give reasons
- (i) We get a crunchy and granular feeling, when we chew guava fruit.
 - (ii) Branches of a tree move and bend freely in high wind velocity
33. Cells of epidermal tissue form a continuous layer without intercellular space. Why?

IV. LONG ANSWER TYPE QUESTIONS CARRYING 5 MARKS EACH

- 34.i) Name the outermost layer present in plants
- (ii) Give the characteristic features of this layer.
 - (iii) What are the different roles played by this layer?
- 35(a) Differentiate between xylem and phloem on the basis of the following features:
- (i) Nature of cell elements
 - (ii) Function
- (b) Draw a neat labelled diagram of xylem elements
36. (i) Distinguish between bone and cartilage.
- (ii) What is the importance of ligament?
 - (iii) Why is connective tissue known so?

V Board based questions

37. Multicellular organisms show division of labour. Explain with the help of an example. (1)
38. What are the different elements present in xylem? Give the functions performed by each one

39. Schematically represent different types of connective tissue and write the special feature of each one. (5)
40. Explain the following terms: (a) Cuticle (b) Cork (c) Tendons (3)
41. Draw a labelled diagram of neuron. (3)
42. Give any three features of cardiac muscles. (3)
43. What are the functions of bones, cartilages and tendons? (3)

ANSWER KEY AND HINTS

1	Lateral meristem	1
2	Sclerenchyma	1
3	Phloem	1
4	Cardiac muscle	1
5	Blood	1
6	False	1
7	True	1
8	False	1
9	False	1
10	True	1
11	Cutin	1
12	Squamous	1
13	Ligaments	1
14	Adipose	1
15	Fibre	1
16	1 - c, 2 - a, 3 - e, 4 - b, 5 - d	1
17	C	1
18	A	1
19	Storage	1
20	Root and shoot tips	1
21	Nervous tissue	1
22	Small cells, dense protoplasm, actively dividing	1
23	Transport of food	1
24	Features of skeletal, smooth and cardiac muscles – voluntary/involuntary, striated/non-striated, shape	3
25	General features – closely packed cells, no intercellular space, very little cementing material, extra cellular basement material etc.	3
26	Sieve tube, companion cell, parenchyma, fibre Diagram	3
27	(a) Apical meristem (b) Small actively dividing cells, no vacuoles, dense protoplasm	3
28	Parenchyma- thin and cellulosic, collenchyma – corners thick and made up of pectin, sclerenchyma – thick and made up of lignin	3

29	Fat deposit acts as insulator and thus prevents the loss of heat from body	3
30	Due to transpiration, loss of water in the form of water vapour through stomata	3
31	Presence of aerenchyma, explanation of aerenchyma and mention the functions	3
32	(i) Due to the presence of sclerenchyma cells in the pulp (ii) Collenchyma is present, provides flexibility and easy bending	3
33	Single layered and compactly arranged to perform their functions, mention the functions	3
34	(a) Epidermis (b) Features – single layered, compactly arranged, no intercellular space, outer and lateral walls are thick (c) Functions – any four	5
35	(a) Elements of xylem and phloem, functions (b) Diagram	5
36	(i) Bone – hard matrix, matrix is with calcium and phosphorus; Cartilage – flexible, matrix is with sugar and proteins (ii) Connect two bones (iii) It connects or links different parts or systems	5
37	Mention the function of different systems	1
38	Tracheids and vessels – transport of water and minerals, parenchyma- storage and lateral conduction, fibres – mechanical support	5
39	Special feature of Blood, bone, cartilage, adipose and areolar	5
40	Cuticle – outermost waxy coating, prevents water loss Cork – Replaces epidermis, impervious Tendons – Connect muscles to bones	3
41	Diagram	3
42	Cardiac – striated, involuntary, branched, cylindrical	3
43	Bone – structural frame work and movement Cartilage – Provides flexibility and helps in movement Tendons – Connect muscle to bones	3

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