



INDIAN SCHOOL AL WADI AL KABIR

Class: XI	Department: SCIENCE 2020 -2021 SUBJECT : BIOLOGY	Date of completion: Second week of July
Worksheet no.4 with answers	CHAPTER: Structural Organisation in animals	Note: A4 FILE FORMAT
NAME OF THE STUDENT	CLASS & SEC:	ROLL NO.

Objective type questions

1. Areolar and adipose tissue are examples for:

- (a) Loose connective tissue (b) Dense connective tissue
(c) Compound epithelium (d) Specialised connective tissue

2. The type of epithelium which is made up of single, thin layer of flattened cells with irregular boundaries

- (a) Squamous epithelium (b) Cuboidal epithelium
(c) Columnar epithelium (d) Glandular epithelium

3. Which one of the following types of cell is involved in making of the inner walls of large blood vessels

- (a) Cuboidal epithelium (b) Columnar epithelium
(c) Squamous epithelium (d) Stratified epithelium

4. Which of the following is not a connective Tissue.

- (a) Bones (b) Muscles
(c) Cartilage (d) Blood

5. To which category does Adipose tissue belong

- (a) Epithelial Tissue (b) Muscular Tissue
(c) Connective Tissue (d) Neural Tissue

6. The clitellum is a distinct part in the body of earthworm, it is found in?

- (a) Segments 13 – 14 – 15 (b) Segments 14 – 15 – 16
(c) Segments 12 – 13 – 14 (d) Segments 15 – 16 – 1

7. Setae help in locomotion in earthworm but not uniformly present in all the segments.

Select among the following that represents setae.

- (a) 1st segment (b) Last segment
(c) Clitellar segment (d) 20th – 22nd segment

8. Mark the odd one in the series

- a) Areolar tissue, blood, neuron, tendon
b) RBC, WBC, platelets, cartilage
c) Exocrine, endocrine, salivary gland, ligament

2 Marks questions

1. Name the fat storing connective tissue. Give its structure.
2. Distinguish between simple and compound epithelium.
3. What are the functions of epithelial tissue?
4. Give differences between dense regular and dense irregular connective tissue
5. Match the followings

- | | |
|----------------------------|-----------------|
| A. Adipose tissue | i. Nose |
| B. Stratified epithelium | ii. Blood |
| C. Hyaline cartilage | iii. skin |
| D. Fluid connective tissue | iv. Fat storage |

6. Name the different cell junctions found in tissues.
7. Give two identifying features of an adult male frog.

3 Marks questions

1. Answer briefly :

- a) Stratified epithelial cells have limited role in secretion. Justify their role in our skin.
- b) How does a gap junction facilitate intercellular communication?
- c) Why are blood, bone and cartilage called connective tissue?

2. Classify and describe epithelial tissue on the basis of structural modifications of Cells in the form of a table, indicating any one location and function.

3. Write down the common feature of the connective tissue. On the basis of structure and function, differentiate between bones and cartilages.

ANSWERS

MCQ- QUESTIONS 1 to 7

Objective type questions

1- a	2- a	3- c	4- b	5- c	6- b	7- d
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8.a—neuron b----cartilage c—ligament

2 mark questions answers

1. Adipose Tissue-

- i) loose connective tissue
- ii) located beneath the skin
- iii) Excess nutrients is converted into fats and stored in this tissue

2. Simple-single layer of epithelial cells

Main functions—diffusion, excretion , secretion

Compound -more than two layer of epithelial cells

Main function-protection

3. diffusion, excretion , secretion, protection (any 4)

4. Dense regular tissue

- i) Collagen fibres are present in rows between many parallel bundles of fibres
- ii) Tendons & ligaments

Dense irregular tissue

3) Present in the skin

ii) Provides strength making the skin resistant to tearing.

5. A-iv B-iii C-I D-ii

6. All cells in epithelium are held together with intercellular material, these specialized junctions are called cell junctions

- Cell junctions provide structural and functional links between individual cells.
- The three types of cell junctions are

i) TIGHT ii) ADHERING iii) GAP

7. A male frog is distinguished from a female frog by the presence of vocal sacs and a copulatory pad on forelimbs.

A female frog lacks these body features

3 Marks questions answers

1a) Many layered-Compound epithelium—protection

1b) Helps the cells to communicate with each other by connecting the cytoplasm of adjoining cells, for rapid transfer of ions, small molecules and sometimes big molecules.

c) They carry out the function of supporting, connecting and have cells embedded in the matrix

2.

TYPE	STRUCTURE	LOCATION	FUNCTIONS
SQUAMOUS	Single thin layer of <u>FLATTENED</u> cells <u>IRREGULAR</u> boundaries	Walls of blood vessels and air sacs of lungs	Forms a diffusion boundary
CUBOIDAL	Single layer of <u>CUBE-LIKE</u> cells	Ducts of glands Tubular parts of nephrons in kidneys	Secretion and absorption
COLUMNAR	Single layer of <u>TALL</u> and <u>SLENDER</u> cells. Nuclei located at the base	Lining of stomach and intestine	Secretion and absorption

3. HAS TWO PARTS ---- MATRIX + CELLS PRESENT IN THE MATRIX

Cartilage – Cells are known as chondrocytes which are enclosed in small cavities.

Intercellular material is solid and pliable and can resist compression.

Bone – Cells are known as osteocytes which are present in spaces called lacunae

The intercellular material is hard and non-pliable and rich in collagen fibres

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