	INDIAN SCHOOL AL WADI AL KABIR	
Class: XI	**Department: SCIENCE 2023-2024** **SUBJECT: BIOLOGY**	**Date of submission:** **23.11.2023**
Worksheet 7 **with answers**	**CHAPTER: ANIMAL KINGDOM & FROG**	**Note:** **A4 FILE FORMAT**
NAME OF THE STUDENT	**CLASS & SEC:**	**ROLL NO.**

Multiple Choice Questions (1M)

1. Which class has the largest number of animals?

   a. Fishes
   b. Insects
   c. Reptiles
   d. Mammals

2.Salamander belongs to the class

   a. Pisces
   b. Aves
   c. Reptiles
   d. Amphibian

3. Flame cells are the excretory structures for

   a. Annelida
   b. Coelenterates
   c. Platyhelminthes
   d. Echinodermata

4. Phylum Porifera is classified based on

   a. Branching
   b. Symmetry
   c. Spicules

d. Reproduction

5. The canal system in sponges develops due to

a. Porous walls
b. Gastrovascular system
c. Reproduction
d. Folding of inner walls

6. Frogs are _____
a) homeothermic
b) warm-blooded
c) poikilothermic
d) heterothermic

7. Which of these methods are utilized by frogs for protection?
a) Speed
b) Spikes
c) Mimicry
d) Playing dead

8. Which of these structures protects the eyes of the frog in water?
a) Nictitating membrane
b) Tympanum
c) Bidder's canal
d) Cloaca

9. Which of these structures in frog receive sound signals?
a) Webbed feet
b) Skin
c) Nictitating membrane
d) Tympanum

10. Frogs show sexual dimorphism. True or false?
a) True
b) False

Short Answer Questions (2M)

Q11. How are pneumatic bones and air sacs important in aves?

Q12. What is the triploblastic organization?

Q13. What do you mean by the diploblastic organization in animals?

Q14. Explain dioecious and hermaphrodite.

Q15. Explain why the frogs are having a slimy skin. Explain the terms - cutaneous respiration, tympanic membrane.

Long Answer Type Questions (3M)

Q16. What is bioluminescence? Elaborate with an example.

Q17. What is the difference between diploblastic and triploblastic animals?

Q18. What is the function of feathers in birds?

Q19. How do endoparasites survive inside the body of the host?

Q20. What do you think can be the reasons for the arthropods to constitute the largest group of the animal kingdom? Elaborate your point with reasons.

5 Marks Questions

Q.21.What is the importance of feathers in birds?

Q22. Explain the digestive system of Frog with well labelled diagram.

Q23. Explain the excretory or reproductive system of male or female frog with a well labelled diagram.

CASE STUDY QUESTIONS

Q23. Epithelial tissue is commonly called as epithelium. This tissue provides an external and internal covering of the body and organs. The cells are compactly packed with little intercellular matrix. There are two types of epithelial tissues namely simple epithelium and compound epithelium. Simple epithelium is composed of a single layer of cells and functions as a lining for body cavities, ducts, and tubes. The compound epithelium consists of two or more cell layers and has protective function as it does in our skin. Based on structural modification of the cells, simple epithelium is further divided into three types. These are (i) Squamous, (ii) Cuboidal, (iii) Columnar.
Some of the columnar or cuboidal cells get specialised for secretion and are called glandular epithelium. They are mainly of two types: unicellular, consisting of isolated glandular cells (goblet cells of the alimentary canal), and multicellular, consisting of cluster of cells (salivary gland).

Compound epithelium is made of more than one layer (multi-layered) of cells. Their main function is to provide protection against chemical and mechanical stresses. They cover the dry surface of the skin, the moist surface of buccal cavity, pharynx, inner lining of ducts of salivary glands and of pancreatic ducts.

All cells in epithelium are held together with little intercellular material. In nearly all animal tissues, specialised junctions provide both structural and functional links between its individual cells. Three types of cell junctions are found in the epithelium and other tissues. These are called as tight, adhering and gap junctions. Tight junctions help to stop substances from leaking across a tissue. Adhering junctions perform cementing to keep neighbouring cells together. Gap junctions facilitate the cells to communicate with each other by connecting the cytoplasm of adjoining cells, for rapid transfer of ions, small molecules and sometimes big molecule.

1.) _____ Junctionprovides attachment to keep neighbouring cells together and intact.

a) Tight junction

b) Adhering junctions

c) Gap junctions

d) All of the above

2.) _____Junctionfacilitate the communication between the adjacent cells.

a.) Tight junction

b) Adhering junctions

c) Gap junctions

d) All of the above

3.) Name the organ in which cilliated epithelium are found.Give the functions of cilia present in it.

4.) Write the name of organ or location where all three types of epithelium tissue serves some functions?

5.) Give the functions of tight junction and gap junctions.

Answer Key

1) d
2) d
3) c
4) c
5) d
6) c
7) c
8) a
9) d
10) a
11) Ans: Pneumatic bones are hollow and filled with air that helps Aves in flying. Air sacs are basically the air reservoirs. Plus, they regulate the body temperature and act as cooling devices in Aves.
12) Ans: If the developing embryo has a third germinal layer, i.e., mesoderm, in between the ectoderm and endoderm. Then, animals with this organization are called triploblastic animals.
13) Ans: The organization in which cells are arranged into two embryonic layers, external ectoderm, and internal endoderm, is called diploblastic organization. Animals with this organization are called diploblastic animals.
16) Ans: Bioluminescence is known as the production and emission of light by a living organism. It is widely observed in marine animals and some fungi. Additionally, a few terrestrial invertebrates. Jellyfish and fireflies exhibit this phenomenon known as bioluminescence.
17) Ans: Diploblastic animals are animals in which cells are arranged in two embryonic layers, i.e., internal endoderm and external ectoderm. For example, coelenterates. On the other side, triploblastic animals are those animals that have a triple layer mesoderm along with the ectoderm and endoderm. For example, chordates.
18) Ans: The function of feathers in birds are as follows:
The feathers help in maintaining the body temperatures of birds.
They provide airfoil shapes for wings to help in flight.
They act as the secondary sex characters in both the sexes of birds. The colour and markings help in attracting mates.

19) Ans: The endoparasites have the following features which enables them to survive inside the body of the host:

Anaerobic respiration.
Exchange of gases through the body surface.
They possess an additional organ for attachment.
Well-developed reproductive organs.
A thick body covering is present.
They have no locomotory organs.
Tapeworms do not have a digestive system and absorb the digested food of the host.

20) Ans: It is true that the Arthropods are constituted as the largest group in the animal kingdom. The reason behind this statement is that they are found and habitat on the land, sea as well as air. Plus, they make up over three fourths of the currently discovered living and fossil organisms. We know that they range in distribution from the deep sea to the peaks of the mountains. Thick, tough, non-living chitinous cuticles in them form the exoskeleton which protects the organism from predators. It further helps to withstand temperatures up to 100°C or more along with preventing the water loss.

A.21. Feathers are found in all birds (Aves). They are the epidermal growths that form the distinctive outer covering of the bird's body and are found on both wings and the tail.

In birds, feathers help in:

1. Controlling flight.
2. Serve as camouflage against their predators.
3. In many bird species, the different patterns of feathers and attractive colours are part of the sexual dimorphism.
4. Insulating birds from water and cold temperatures and also provide insulation to their eggs and young ones.
5. In some species of birds like owl and woodpecker, feathers are used for balancing while walking on the ground, climbing the trees, and also helps in hearing and making different sounds like drumming, humming and whistling.

A22. And A23. Refer to the NCERT.

CASE STUDY ANSWERS

1.) b

2.) c

3.) They are mainly present in the inner surface of hollow organs like bronchioles and fallopian tubes. The function of cilia is to move particles or mucus or ova in a specific direction over the epithelium.

4.) On the basis of structural modification of the cells, simple epithelium is further divided into three types. These are Squamous,Cuboidal and Columnar

Squamous epithelium :
It is found in the walls of blood vessels and air sacs of lungs and are involved in functions like forming a diffusion boundary.

Cuboidal epithelium :
It is commonly found in ducts of glands and tubular parts of nephrons in kidneys and its main functions are secretion and absorption.

The Columnar epithelium :

It is found in the lining of stomach and intestine and help in secretion and absorption.

5.) All cells in epithelium are held together with little intercellular material, called junction.

Tight junctions help to stop substances from leaking across a tissue.
Gap junctions facilitate the cells to communicate with each other by connecting the cytoplasm of adjoining cells, for rapid transfer of ions, small molecules and sometimes big molecule.

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