**Pakistan School , Kingdom of Bahrain**

**E- Support and Learning Material / Session 2020-2021**

**Subject: Biology Grade: 9**

**Book: Biology 9th PLD Publishers FIRST TERM**

**CHAPTER # 1 Introduction of Biology Page No. 7-8-9-10**

**NOTE: FOCUS MAINLY ON YOUR TEXT BOOK**

**The levels of organization.**

Q. 1 Describe the level of organizations of life?

Ans In order to understand the various phenomena of life, biologists study

Biological organization at different levels.

1. **Subatomic and atomic level**

All types of matters are made up of elements and each element contains a single kind of atoms (a; not, tom; cut). The atoms are actually made up of many sub atomic particles. The most stable atomic particles electrons, protons and neutrons. examples of atoms are Hydrogen, Oxygen, Carbon etc.

1. **Molecular levels**.

In organisms biological elements usually do not occur in isolated forms rather they are combined through ionic or covalent bonding. The stable particles formed by such bonding is called as molecules. Proteins , carbohydrates, lipids etc.

1. **Organelle and cell levels**.

Bio molecules assemble in a particular way and form organelles. The organelles are

actually, sub cellular structures and when they assemble together units of

life that is cells are formed. e.g. bone cells nerve cells etc.

1. **Tissue Level.**

In multi cellular organisms, similar cells (performing similar functions) are

organized into groups called tissues. E.g. epithelial tissues, connective tissues etc.

1. **Organ and Organ System level.**

In higher multi cellular organisms more than one type of tissue having related functions are organized together and make a unit called organ. e.g. stomach, heart etc.

When different organ perform their specific functions together in cooperation with each other, this system is called as organ system. e.g. digestive system, Circulatory system etc.

1. **Individual Level.**

Different organs and organ system are organized together to form an

Individual or organism. In Organism, the function, processes and activities of various organs and organ system are coordinated.

1. **Population Level**

A population level is defined as a group of organisms of the same species

Located at the same place in the same time.

1. **Community Level**

A community level is an assemblage of different populations, interacting with one another within the same environment. A forest may be Considered as a community.

**Biosphere Level**

The part of the earth inhabited by organisms communities is known as Biosphere. . It constitutes all ecosystem and Also called the zone of life on earth.

**Q. 2 Write the name and functions of tissues present in stomach?**

Ans. Two major tissues are present in stomach structure

Epithelial(glandular) Tissues secrete gastric juice for the digestion of protein.

Muscular tissues. Perform contraction of stomach wall from grinding of

Food and to movefood to posterior end.

**Q. 3 Relate organ and organ system in single example of digestive system.**

Ans. A digestive system is an organ system that carries out the process of

digestion. Major organs in its frame work are oral cavity, stomach, small

intestine liver and pancreas. All the organs help in the process of digestion.

**Q. 4 What are the bio elements? Name them.**

Ans. Out of 92 kinds of elements that occur in nature, 16 are called bio elements.

Bio elements are the elements that take part in making a body mass of a living organisms.

Out of these Bio elements only six (O, C, H, Ca and P) make 99 % of the

Total mass. Other 10 elements (K, S, Cl, Na, Mg, Fe, Cu, Mn, Zn, Si) collectively make 1% of the total mass. Oxygen 65 %, carbon 18 %, hydrogen 10%, nitrogen 3%, calcium 2%, phosphorus 1%, others 1%.

**Q. 5 What are Micro and macro molecules?**

Ans. Bio molecules are classified as macromolecules andmacromolecules**. Macromolecules** are with low molecular weight e.g. Glucose, Water etc. **Macromolecules** are with high molecules weight e.g. Starch, Proteins, Lipids etc.

**Q. 6 Is there any division of labour among the cells of a colony? If you find division of labour among the cells and tissue what level of cellular organization is it?**

Ans. In colonial type of cellular organization many unicellular organisms live together

But they do not have any division of labour among them, Each cell in a colony

Lives its own live and doesn’t depend another cells for its vital requirement.

**Q. 7 What is Volvox?**

Ans. It is a green alga found in water that shows colonial organization. Hundreds of Volvox cells make a colony.

**Note: Study the chapter from the text book and do all questions in the exercise. Ask any queries in second class.**

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**CHAPTER # 1 Introduction of Biology Page No. 17**

**MCQs**

**Choose the correct Answers**

1. Members of the same species living in the same place at the same time make a;
2. Habitat b) Biosphere c) Community d**) Population**
3. If the scientist is studying the methods of inserting human insulin gene in bacteria,

Which branch of Biology may this be?

1. Anatomy b) Physiology c) **Biotechnology**  d) Pharmacology
2. Which one will be the correct sequence of the levels of organization of life?
3. Cell, Organelle, molecule, Organ, tissue, organ system, Individual
4. Molecule, tissue, organelle, cell, organ system, organ, Individual
5. **Molecule, organelle, cell, tissue, organ, organ system, Individual**
6. Organ system, organ, tissue, cell, molecule, organelle, Individual
7. Which of these major bio elements is in the highest percentage in protoplasm?
8. Carbon b) Hydrogen c)  **Oxygen** d) Nitrogen
9. Which of the following group include organisms all of which are absorptive in their

Nutrition?

1. Protists b) Animals c) Bacteria d) **Fungi**
2. Similar cells organized into groups and performing same functions, are known as,

a) Organelle b) **Tissue** c) Organ d) Organ system

1. Which of these tissues also makes the glandular tissue in animals?
2. **Epithelial tissue** b) Muscular tissue c) Connective tissue d) Nervous tissue
3. The level of organization that is less definite in plants is;
4. Tissue level b**) Organ level** c) Organ system level d) Individual level
5. What is TRUE about Volvo?

a) Unicellular prokaryote b) Unicellular eukaryote

c) **Colonial eukaryote** d) Multicellular eukaryote

10. When we study the feeding relations among different animal species of a forest, at what level of organization we are studying?

a) Individual b) Population c)  **Community** d) Biosphere