**25May, 2020 JESUS AND MARY SCHOOL AND COLLEGE MODULE 2**

**CLASS – 7**

BIOLOGY

**CHAPTER –KINGDOM CLASSIFICATION**

Definition of classification :-

The system of assembling organisms into groups on the basis of likenesses and differences is called classification.

Advantages of classification :-

1. Systematic arrangement in groups or categories according to established criteria specifically taxonomy.
2. The classification of organisms is known as taxonomy.

Grouping organisms together on the basis of similarities and their separation into different groups on the basis of differences is called **biological classification.**

Classification of living world :-

Carl von Linnaeusintroduced fourcategories for classification–Class, order, genus and species. Family, phylum and kingdom were added in later.

So, kingdom is the highest category and species is the lowest

Category of classification.

**1.Kingdom 2.Phylum 3.Class 4.Order 5.Family6.Genus7.Species**

Total seven major categories were made in classification.

Five kingdom classification :- It was given by R.H. Whittaker in 1969 .

The living world is classified into five kingdoms:-

1. **Kingdom Monera:-** In this kingdom prokaryotic organisms such as bacteria and blue – green algae occur.
2. **Kingdom Protist :-** In this kingdom unicellular eukaryotic organisms like protozoans ( Amoeba , Euglena and Paramecium ) and algaeoccur.
3. **Kingdom Fungi:-** In this kingdom multicellular nongreen, saprophytes, the fungi like mushroom , yeast and bread mould are found.
4. **Kingdom Plantae:-** In this kingdomall multicellular green plants with autotrophic nutrition and all organisms able to perform photosynthesis are found.
5. **Kingdom Animalia:-** In animalia Kingdom all multicellular animals with heterotrophic nutrition(eg. Bird, Human, Cow).are found.

Kingdom : MoneraExamples: Bacteria and blue green algae.

Bacteria :-

* Bacteria are microscopic single celled organism.
* They are the simplest prokaryotic organism.
* A prokaryote is a unicellular organism that lacks a membrane – bound nucleus, mitochondria, or any other membrane -bound organelle.
* Bacteria have ribosomes for protein synthesis.

Useful bacteria :-

* In medicine:-Some bacteria are used to prepare antibiotics, serums, with antibodies, and vaccines etc.
* In industry:-

1. In industry bacteria helps to prepare curd.
2. Curing of cheese.
3. Manufacturing of vinegar (acetic acid).
4. Tanning of leather.
5. Manufacturing of alcohol.

* In agriculture:-

**Nitrogen Fixation:-**  some bacteria present in the soil are help in nitrogen fixation . Rhizobium bacteria are present in the root nodules of leguminous plants.

The process of converting free atmospheric nitrogen of the soil suitable forms like nitrates which can be easily observed by the plants is called nitrogen fixation.

**Nitrification**:- The process of conversion of ammonia from the soil to nitrates by nitrobacter bacteria is called nitrification .

**Denitrification:-**  The process of conversion of nitrates from wastes and dead bodies into nitrogen gas is a called Denitrification.

Harmful bacteria :-

* Diseases : Bacteria cause many serious diseases in humans, animals , and plants .
* Spoilage of food:- Bacteria cause rotting of food, milk, fruits, vegetables, meat etc .

Kingdom 2 : protista:-

In this kingdom protists are simple,unicellular eukaryotic organisms .

Example:- Protozoans ( Amoeba , Paramecium and Euglena ) and unicellular algae ( chlamydomonas ).

AmoEba :- This is a unicellular animal . It is found in pounds.

* It is irregular in shape.
* Its shape changes by the formation of new pseudopodia.
* Its body is covered by a thin cell membrane. The cytoplasm has nucleus in the centre a large contractile vacuole filled with water and one or more food vacuoles.
* Contractile vacuole helps in excretion of the nitrogenous waste.
* In Amoeba, exchange of gases for respiration through cell membrane.
* Amoeba multiplies by splitting into two. This is called **binary fission.**

Kingdom 3 : Fungi :- Characteristic features –

* Fungi are simple, nongreen multicellular eukaryotes.
* They grow on dead and decaying organic matter.
* They are without chlorophyll.
* Most of them are saprotrophs as they feed on dead and decaying organic matter.
* Myceliumare multicellular filamentous fungus which is made of several thread-like structures called hyphae.
* Its cell walls are made up of chitin.
* They reproduce by spore formation.

Examples:- Mucor and Rhizopus ( moulds), Mushroom.

**WORKSHEET 2**

1. **Short answer Question:-**

*Q1.) What is classification?*

*Q2.) Write the name of five-kingdom classification.*

*Q3.) What is binary fission?*

*Q4.) What is nitrification?*

*Q5.) Give four characteristics features of fungi.*

1. **Fill in the blanks :-**
2. *Monerans are unicellular and \_\_\_\_\_\_ organisms.*
3. *Nucleus is \_\_\_\_\_ in bacteria.*
4. *Bacteria have \_\_\_\_\_ for protein synthesis.*
5. *Lactobacillus bacteria are used for \_\_\_\_\_ formation.*
6. *Fungi reproduce by \_\_\_\_\_ formation.*
7. *Exchange of gases for \_\_\_\_ in Amoeba.*
8. **Write True or False for the following statements:-**
9. *Bacteria are multicellular organism which lack chlorophyll. ( )*
10. *Some bacteria are helpful in increasing soil fertility. ( )*
11. *Bacteria are eukaryotic organisms. ( )*
12. *Anthrax of sheep is caused by bacteria. ( )*
13. *Rhizobium bacteria are present in the root nodule of legumes. ( )*

**Note:- Please do this work in yourcopies which will be checked when the school reopens . Please consider this important.**

Solutions to worksheet 1 uploaded on 11 may, 2020

**Ans1.)** Four different types of epithelial tissues and its functions:-

1. **Squamous epithelium:** These are for the protection of underlying tissues.
2. **Cuboidal epithelium:***It helps in absorption and secretion. Formation of gametes in ovaries and tests.*
3. **Columnar epithelium:***It is used for absorption and secretion.*
4. **Ciliated epithelium:** *In this tissue cilia make substance to move in the cavity.*

**Ans2.)** Nervous tissue is made of nerve cells or nueron. Nueron is structural and functional unit of nervous system. The nerves conduct message from one part to other part of the body.

**Ans3.)** Tendon Ligament

1. The tendons connect skeletal a) The ligament connect bone muscles to bones. To bone.

**Ans4.)** White blood cells protect body against disease, because they fight. So, white blood cell are called The soldier of the body.

**Ans5.)**There are three types of muscular tissues and its functions:-

1. **Striated Muscles:-** They help in the movement of bones and body parts and help in locomotion .
2. **Unstriated Muscles:-**These muscles help in involuntary functions of the body .
3. **Cardiac Muscles:**-  *These muscleshelp in pumping of blood .*

B. Fill in the blanks:-

1. Connective. 3. Nerve cells.
2. White blood cells. 4. Bones

5. Meristematic tissue.

C. Write True or false for each statements .correct the statements :-

1. *T*rue. 2.True 3.True

4. False [  *Do not divide ] 5. True*

*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\**