**8th June, 2020 JESUS AND MARY SCHOOL AND COLLEGE MODULE 3**

**BIOLOGY**

**CLASS – VII**

**CHAPTER – KINGDOM CLASSIFICATION**

# **KINGDOM 3: FUNGI**

**MOULDS:** These are saprophytic fungi growing on dead organic matter rotten fruits , bread and others edibles.

**RHIZOPUSANDMUCOR (BREADMOULD):** The body of multicellular filamentous fungus is called mycelium, which is made up of thread- like structures called hyphae. The cell wall is made up of fungal cellulose.The hyphae are three types :

* Stolons
* Rhizoidal hyphae
* Sporangiophores
* Bread moulds are saprophytes. They secrete digestive enzymes on stale bread and starch is digested into glucose. This is called extracellular digestion.Food is stored as glycogen and oil droplets.Bread moulds use oxygen in respiration.
* **USEFUL FUNGI:**Some fungi are used in food industry, medicine industry and agriculture.

**IN FOOD INDUSTRY:**

* **MUSHROOMS:**For examplemorchella and agaricus are edibles fungi .These are rich in proteins and vitamins.
* **YEAST:**It is used in bakeries to make the dough soft and puffy for making bread and in breweries for making alcohol and wines.
* **IN MEDICINE:**
* **ANTIBIOTICS:**They are produced by some fungi which kill other micro-organisms in chemical industry.
* **ROLE IN AGRICULTURE:**
* **SOIL FERTILITY:**Saprophytic fungi decompose the dead bodies of animals and plants. Organic materials of the body are converted into nitrates, sulphates, phosphates etc. These minerals increase the fertility of soil.
* Some fungi control and prevent spread of other disease causing micro-organism in the soil.
* **HARMFUL FUNGI :**
* **HUMAN DISEASES:**Disease like ringworm, Vaginal infection etc are caused by fungi.
* Moulds spores cause allergies as respiratory problems and sneezing.
* **PLANT DISEASE:**Diseases like white of crucifers, late blight of potatoes, rust in wheat are caused by fungi.
* **SPOILAGE OF FOOD:**Mucor and rhizopus spoils our fruits, vegetables, meat etc.
* **SPOILAGE OF LEATHER GOODS:**There are some fungi which grow on leather made shoes, bags, purses, belts etc and destroy them.

# **KINGDOM 4: PLANTAE:**

* **CHARACTERISTICS FEATURES:**
* They are multicellular green organisms.
* Their cell walls are made up of cellulose.
* Plantsare autotrophs.
* They manufacture there food in presence of sunlight from water and carbon dioxide with the help of green pigments chlorophyll.
* Plantsgrow throughout their life.
* Some plants are very large some are small and some are microscopic.
* Some plants bear flowers and produce fruits and seeds while others do not.
* Structural differentiation lead to development of various organelles.
* Reproduction is primarily sexual ,

Plants can be grouped as non-flowering and flowering plants it is based on the above characteristics.They are all green photosynthetic plants.

**NON-FLOWERING PLANTS:**The plants which do not bear flowers,seeds and fruits are called cryptogams. They are classified into three groups:-

* **Thallophyte**
* **Bryophyta**
* **Pteridophyte**
* **THALLOPHYTE:**They are the simplest plants.such a plant body which is not divided into roots , stem and leaves is called thallus and such plants are called thallophytes . for example : Algae , Fungi , Lichens etc . They are autotrophic in nature
* **ALGAE:**The algae are found growing in ponds ,. Lakes ,river ,sea and ocean.The algae may be single celled or made of rows or may be made of colonies of cells. They may be unicellular or multicellular.All algae contain chlorophyll ,thus ,they prepare their own food.They use carbon di oxide present in water for photosynthesis on the basic of pigments , algae are divided into three types :
* **GREEN ALGAE**
* **BROWN ALGAE**
* **RED ALGAE**

**Difference between algae and fungi**

| **Characters** | **Algae** | **Fungi** |
| --- | --- | --- |
| * Nutrition | Autotrophic mode of nutrition | Heterotrophic mode of nutrition |
| * Photosynthetic pigments | Chlorophyll or blue-green photo synthetic pigments | Photosynthetic pigments are absent |
| * Cell wall | Cell wall is made up of cellulose | Cell wall is made up of chitin |
| * Stored food | Starch | Glycogen and oil |

* **BRYOPHYTA: MOSSES –** They grow as green velvety layers on shady and moist ,. Walls , damp soil and bark of trees.So they are called amphibian plants.They have stems and leaves ,but no roots.They stick to the surface with the help of thread like structures is called rhizoids.Rhizoids help them in absorbing water and minerals from the surface. **EXAMPLES :** Mosses , liverworts and Hornworts.
* **PTERIDOPHYTE: FERNS –** They bear roots stem and leaves but no flowers and seeds.Their underground stem is called rhizome.The leaves of furns bear small rounded bodies on their undersurface so these bodies are called sori which produce spores. **FOR EXAMPLE :** Ferns and horsetails

**Difference between BRYOPHYTA (Mosses) and Pteridophyte (Ferns)**

|  |  |  |
| --- | --- | --- |
| **CHARACTERS** | **BRYOPHYTA**  **( MOSSES )** | **PTERIDOPHYTE**  **( FERNS )** |
| Differentiationof plants body | Plantbodyis not differentiated into true roots, stem and leaves. | Plants body is differentiated into true roots stem and leaves |
| Vascular tissue | Non vascular plants it mean vascular tissue is not developed | Vascular plants ( vascular tissue xylem and phloem is developed ) |

* **FLOWERING PLANTS:**These plants have stem, leaves and well developed true roots. They are called phanerogams.They are divided on the basis of their seeds.They are divided into two groups :

1. **Gymnosperms 2. Angiosperms**

* **GYMNOSPERMS:**They do not have true flowers. The name is based on the unenclosed condition of there seeds.

Gymnosperms bear cones for reproduction but no true flowers and fruits.Cones are both male and female types mal cones produce pollen, which are blown by wind to reach the female cones. Female cones bear ovules. Ovules developed into seeds.Leaves are long and needle shaped.Such leaves are not damaged by snow or frost.These plants grow in cold and mountainous area. **EXAMPLE :** Pine, fir, cedar, cycas etc.

**Difference between Gymnosperms and Angiosperms**

|  |  |  |
| --- | --- | --- |
| **CHARACTERS** | **GYMNOSPERMS** | **ANGIOSPERMS** |
| Flowers | They do not produce lowers | Plants with flowers and seeds |
| Seeds | The seeds are naked | The seeds are enclosed by the fruits wall |
| Ovules | The ovules are not located in the ovary | The ovules are enclosed in the ovary |
| Vascular tissue | xylem lacks vessels and phloem lacks companion cells | Xylem contains vessels and phloem contains companion cells |
| Microspores and megaspores | The microspores and megaspores are produced by male and female cones respectively | The microspores are produced in anther while the megaspores are produced in the ovules of the ovary in flowers |
| Level of evolution | Primitive group of seeds bearing plants | Highly evolved plants |

**ANGIOSPERMS :**

* They bear true flowers.
* They have fruits.
* Seeds are enclosed in fruits.
* The seeds develop in the female part of the flowers, are called ovary.
* Ovary develops into fruits.
* Seeds have seed leaves called cotyledons and the embryo (the baby plant).
* Seed leaves store food to be used by the embryo when it grows into a new plant.
* The embryo grows into a new plant when seed germinates. They have well developed roots, stem and leaves. Angiosperms are divided into two groups depending on the number of cotyledons in the seeds.

1. **MONOCOTYLEDONS:**In monocotyledonous plants, seeds contain only one cotyledon as in wheat, maize, rice, grasses etc these plants are called monocots.
2. **DICOTYLEDONS:**In these plants, seeds contain two cotyledons as in gram, pea, bean, brinjal, mango etc. These plants are called dicots.

**WORKSHEET 3**

1. **SHORT ANSWER TYPE QUESTION:**
2. Explain any two useful fungi.
3. What are angiosperms ? Mention two division of angiosperms. Give two examples of each division.
4. Give two differences between Algae and Fungi.
5. Write short notes on :
6. Monocotyledons **(b)**Dicotyledons
7. Which type of nutrition takes place in kingdom plantae.
8. What are thallophytes? Give two examples.

**B. FILL IN THE BLANKS:**

1. Bacteria are \_\_\_\_\_\_\_\_\_\_\_\_\_ organism.
2. Mosses belong to the group \_\_\_\_\_\_\_\_\_\_\_\_\_.
3. Volvox is a \_\_\_\_\_\_\_\_\_\_\_\_\_ algae.
4. Yeast and bread mould are \_\_\_\_\_\_\_\_\_\_\_\_\_.
5. \_\_\_\_\_\_\_\_\_\_\_\_\_ are called amphibians of plant kingdom.
6. The leaves of fern bear \_\_\_\_\_\_\_\_\_\_ on their under surface.

**C. GIVE ONE WORD FOR THE FOLLOWING:**

1. Algae, fungi and bacteria. \_\_\_\_\_\_\_\_\_\_\_\_\_
2. Flowering plants that have two cotyledons. \_\_\_\_\_\_\_\_\_\_\_\_\_
3. The underground stem of Pteridophytes. \_\_\_\_\_\_\_\_\_\_\_\_\_
4. Plants which do not have root stem and leaves. \_\_\_\_\_\_\_\_\_\_\_\_\_
5. Plants that grow on dead remains or other plants and animals. \_\_\_\_\_\_\_\_\_\_\_\_\_

**D. WRITE TRUE OR FALSE:**

1. Gymnosperms bear flowers. ( )
2. In angiosperms, seeds develop in the ovary. ( )
3. Dicotyledonous seeds bear two seeds leaves. ( )
4. Female cones bear ovules. ( )
5. Vascular tissue is developed in BRYOPHYTA. ( )

# **Given below are the answers to module 2 uploaded on 25th May 2020.**

# **WORKSHEET 2**

1. **SHORT ANSWER QUESTION:**

**Q 1. What is classification?**

**Ans.** The system of assembling organisms into groups on the basis of likenesses and

difference is called classification.

**Q 2. Write the name of five Kingdom classification.**

**Ans.** The name of five kingdom classification.

* Kingdom Monera
* Kingdom Protista
* Kingdom Fungi
* Kingdom Plantae
* Kingdom Animalia

**Q 3. What is binary fission?**

**Ans.** Binary fission is the type of asexual reproduction in which one cell divides into two daughter cells. e.g. Amoeba.

**Q 4. What is nitrification?**

**Ans.** The process of conversion of ammonia from the soil to nitrates by nitro bacteria is called nitrification.

**Q 5. Give four characteristic feature .**

**Ans.** The four characteristics features of fungi -

* Fungi are simple, non-green 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. **EXAMPLES:** Mucor and mushrooms etc.

**B. FILL IN THE BLANK:**

1. Monerans are unicellular and **Prokaryotic** organisms.
2. Nucleus is **absent** in bacteria.
3. Bacteria have **ribosomes**  for protein synthesis.
4. Lactobacillus bacteria are used for **curd** formation.
5. Fungi reproduce by **spore** formation.
6. Exchange of gases for **respiration** in amoeba .

**C. WRITE TRUE OR FALSE FOR THE FOLLOWING STATEMENTS :**

1. Bacteria are multicellular organisms, which lack chlorophyll. (**FALSE)**
2. Some bacteria are helpful in increasing soil fertility. (**TRUE)**
3. Bacteria are eukaryotic organisms. (**FALSE)**
4. Anthrax of sheep is caused by bacteria. (**TRUE)**
5. Rhizobium bacteria are present in the root nodules of legumes. (**TRUE)**

**Note- Please do all this work in your “Copies” OR “Notebooks” which will be checked when school reopens. Please consider this important.**

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