

Class XI BIOLOGY

Holiday Home work

Prepare Herbarium File and gather information about 20 plants, both primary in the form of actual specimens of the plants and secondary in the form of published information , pictures and recorded notes.

Methods of preparation of herbarium specimens :

- (i) Visit to a field
- (ii) Collect specimen
- (iii) Write date , collection no. , habitat, and special characteristics
- (iv) Press them in old newspaper\blotting papers
- (v) Mount them in coloured A-3 size pastel sheets using acid free tape\ glue
- (vi) Put labels including---scientific names , local name ,date of collection, locality , habitat, main characteristics ,and uses if any .
- (vii) Protect them in A-3 size decorative hand-made folder.

<https://www.indiastudychannel.com/resources/171504-How-to-prepare-a-good-herbarium.aspx>

Write following question –answers in your register:

Ch: 1-- The Living World

- 1 What is meant by living ? Give any four defining features of life forms .
- 2 In a given habitat , we have 20 plant species and 20 animal species . Should we call this as 'diversity' or 'biodiversity'. Justify your answer.
- 3 A ball of snow when rolled over snow increases mass, volume and size. Is this comparable to growth as seen in living organisms ? Why?
- 4 What is the difference between flora, fauna and vegetation ? *Eichhornia crassipes* is called an exotic species ,while *Rouwolfia serpentina* is an endemic species in India . What do these terms refer to?
- 5 A plant may have different names in different regions of the country or world . How do the Botanists solve this problem ?
- 6 What are taxonomic aids ? Give the importance of herbaria and museums . How are Botanical gardens and zoological parks useful in conserving biodiversity?
- 7 Metabolism is a defining feature of all living organisms without exception . Isolated metabolic reactions *in vitro* are not living things but surely living reactions . Comment.
- 8 What is the similarity and dissimilarity between “whole moong dal” and “broken moong dal” in terms of respiration and growth ? Based on these parameters classify them .

- 9 What do you understand by seed gene bank and cryopreservation ?
- 10 Expand : ICBN, ICZN, ICBAcN.

Ch: 2 – Biological Classification

- 1 How is five kingdom classification advantageous over two kingdom classification ?
- 2 Polluted water bodies have usually very high abundance of plants like *Nostoc* and *Oscillatoria*. Give reasons .
- 3 Are chemosynthetic bacteria autotrophic or heterotrophic ? Explain .
- 4 A virus is considered as a living organism and an obligate parasite when inside a host cell . But virus is not classified along with bacteria or fungi . What are the characters of virus that are similar to non-living objects ?
- 5 Diatoms are called ‘pearls of oceans ‘.Why? What is diatomaceous earth?
- 6 Fungi are cosmopolitan , Write the role of fungi in your daily life.
- 7 Cyanobacteria and heterotrophic bacteria have been clubbed together in Eubacteria of Kingdom Monera as per the “Five kingdom classification” even though the two are vastly different from each other . Is this grouping of the two types of taxa in the same kingdom justified? If so why?
- 8 Explain the following terms : halophiles, thermophiles, bacteriophages, mycorrhiza,
- 9 Apart from chlorophyll , algae have several other pigments in their chloroplast . What pigments are found in blue-green ,brown and red algae that are responsible for their characteristic colours?
- 10 Make a list of algae and fungi that have commercial value as food, chemicals ,medicines and fodder .