

UNIT I: DIVERSITY IN THE LIVING WORLD

2. PLANT KINGDOM

1 SAQ [4Marks]

ROOT POINTS

1. **Plant kingdom** consists of all eukaryotic, multicellular chlorophyll plants.
2. Main contents of this chapter are i) Algae ii) Bryophytes iii) Pteridophytes iv) Gymnosperms, v) Angiosperms.
3. **Red algae** belongs to **Rhodophyceae** class and red colour is due to r-phycoerythrin. [SAQ]
4. **Brown algae** belongs to **Phaeophyceae** class and brown colour is due to xanthophyll. [SAQ]
5. Plant body in **liverworts** is thalloid and are amphibians. [SAQ]
6. Plant body in **Mosses** is filamentum and is leafy and are advanced bryophytes. [SAQ]
7. In **homosporous** pteridophytes, plants produce only **one kind of spores**. Ex: Psilotum [SAQ]
In **heterosporous** pteridophytes, plants produce only **two kinds of spores**. Ex: Selaginella.
8. The **haploid spore** germinates into **heart shaped thallus** structured **prothallus**. [SAQ]
9. The **gametophytic** plant body of pteridophytes is called **prothallus**. [SAQ]
10. Prothallus grows on **shady, damp and wet soil**. [SAQ]
11. **Brown algae** produces Algin. **Red algae** produces carrageen. [SAQ]
12. **Bryophytes** play significant role in plant succession. They prevent soil erosion. [SAQ]
13. **Sphagnum** is responsible for peat formation. [NEET-2014]
14. A prokaryotic autotrophic nitrogen fixing symbiont is found in **Cycas**. [2011 PMT]
15. Algae have cells made up of **cellulose, galactans and mannans**. [2010 PMT]
16. Male gametes are flagellated in **Ectocarpus**. [NEET-2015]
17. Conifers are adapted to tolerate extreme environmental conditions because of **thick cuticle**. [NEET-2016]
18. In bryophytes and pteridophytes, transport of male gametes requires **water**. [NEET-2016]
19. Zygote meiosis is characteristic of **Chlamydomonas**. [NEET-2017]
20. An example of **colonial alga** is **Volvox**. [NEET-2017]
21. Floridian starch has structure similar to amylopectin and glycogen. [NEET-2020]
22. Ectocarpus contains **mannitol** as reserve food material. [NEET-2021]
23. **Gemmae** are present in some liverworts. [NEET-2021]
24. In **bryophytes**, the **gemmae** help in asexual reproduction. [NEET-2025]