

## BIOLOGY STANDARD XI

### **Worksheet 3.2                      PLANT KINGDOM**

Q.1. Chose the correct option from the given options:

1. Following plants plays an important role in plant succession:
  - a. Algae.
  - b. Bryophytes.
  - c. Pteridophytes.
  - d. Gymnosperms.
2. feature of Bryophytes among these are:
  - a. Thalloid body with base.
  - b. Lack of roots, stems, and leaves.
  - c. Prominent haploid generation.
  - d. All.
3. Vascular tissues in plants (xylem and phloem) first appear in:
  - a. Bryophytes.
  - b. Pteridophytes.
  - c. Gymnosperms.
  - d. Angiosperms.
4. feature of pteridophytes among these are:
  - a. Prominent diploid generation (sporophyte).
  - b. Roots, stems, and leaves.
  - c. Prominent haploid generation.
  - d. All.
5. A Prothallus is \_\_
  - a. A structure in pteridophytes formed before the thallus develops
  - b. A sporophytic free living structure formed in pteridophytes
  - c. A gametophyte free living structure formed in pteridophytes
  - d. A primitive structure formed after fertilization in pteridophytes
6. A plant shows thallus level of organization. It shows rhizoids and is haploid. It needs water to complete its life cycle because the male gametes are motile. Identify the group to which it belongs to \_\_
  - a. Pteridophytes
  - b. Gymnosperms
  - c. Monocots
  - d. Bryophytes

- Q2. Why are bryophytes called the amphibians of the plant kingdom?
- Q3. The male and female reproductive organs of several pteridophytes and gymnosperms are comparable to floral structures of angiosperms. Make an attempt to compare the various reproductive parts of pteridophytes and gymnosperms with reproductive structures of angiosperms.
- Q4. Heterospory i.e., formation of two types of spores – microspores and megaspores is a characteristic feature in the life cycle of a few members of pteridophytes and all spermatophytes. Do you think heterospory has some evolutionary significance in plant kingdom?
- Q5. How far does Selaginella one of the few living members of lycopodiales (pteridophytes) fall short of seed habit.
- Q6. The heterosporous pteridophytes show certain characteristics, which are precursor to the seed habit in gymnosperms. Explain. 7. Comment on the lifecycle and nature of a fern prothallus.
- Q7. Gametophyte is a dominant phase in the life cycle of a bryophyte. Explain.
- Q8. With the help of a schematic diagram describe the haplo-diplontic life cycle pattern of a plant group.
- Q9. Lichen is usually cited as an example of ‘symbiosis’ in plants where an algal and a fungal species live together for their mutual benefit. Which of the following will happen if algal and fungal partners are separated from each other?
- Both will survive and grow normally and independent from each other.
  - Both will die
  - Algal component will survive while the fungal component will die.
  - Fungal component will survive while algal partner will die. Based on your answer how do you justify this association as symbiosis.
- Q10. Draw labelled diagrams of a. Female and male thallus of a liverwort. b. Gametophyte and sporophyte of Funaria.

References:

- 1 NCERT Text Book of Biology, Class XI
- 2 Biology Exemplar class XI

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