DPP
DAILY PRACTICE PROBLEMS

Class : XIth | **Subject : BIOLOGY**
Date : | **DPP No. : 8**

Solutions

Topic :- Plant Kingdom

1 **(d)**
In gymnosperms the sporophytic phase is dominant and the gametophytic phase is dependent on sporophyte.

2 **(a)**
In angiosperm, pollen grain reaches to embryo sac after its germination on stigma and through pollen tube. Pollen tube carries two male gamete and discharge it into embryo sac

3 **(c)**
Selaginella bryopteris is commonly called **sanjeevani booti.**

4 **(b)**
In *Dryopteris* (pteridophyte), the sporophytic phase is independent and autotrophic, whereas in *Funaria* (bryophyte), the sporophytic phase is dependent on gametophytic phase.

5 **(d)**
Retort cells occur in *Sphagnum*.

6 **(b)**
*Chlamydomonas*occurs in stagnant water (ponds and ditches), though some species are marine.

7 **(c)**
A mycorrhiza is a symbiotic association of a fungus with a roots system. The fungus provides minerals and water to the roots, in turn the roots provide sugar and N-containing compounds to the mycorrhizae. Some plants have the obligate association with mycorrhizae. For example, *Pinus* seeds cannot germinate and establish without the presence of mycorrhizae.

8 **(c)**
The members of class-Chlorophyceae are unicellular, colonial or filamentous have definite chloroplast commonly known as green algae. They are green due to the presence of chlorophyll-*a* and *b* pigments localised in chloroplast

9 **(b)**
In *Pinus*, the pollen grains at maturity are protected by three layered wall, outer most exine the second exo-intine forms two balloon like outgrowths called **wings** and third is intine. Wings help in transportation of pollen grain from one place to another place.

10 **(d)**

The rhizoids in *Funaria* arise from the **basal region** of the stem, which functions as roots.

11 **(c)**
Endosperm in angiosperms develops as a fusion product of secondary nucleus with male gamete. Secondary nucleus is diploid chalazal polar nucleus and haploid microphylar polar nucleus

12 **(d)**
The bryophytes represent two morphologically distinct generations, *i.e*., gametophytic and sporophytic. The gametophytic phase is dependent upon as well as being permanenty attached to the gametophyte, *e.g*., *Riccia*, *Marchantia*.

13 **(a)**
Out of these, *Equisetum* is a vascular cryptogam.

14 **(c)**
Both statements are true

15 **(d)**
The giant red wood tree is a gymnosperm. The gaint *Sequoia* is the world's most massive tree and arguable the largest living organism on earth

16 **(d)**
In bryophytes, zygote is the beginning of the sporophytic generation. Within venter of the archegonium, the zygote undergoes segmentation and develops without a resting period into a multicellular, undifferentiated structure called embryo. The embryo by further segmentation and differentiation finally develops into a full fledged sporophyte, called sporogonium.

17 **(d)**
All the statements are correct.
Sexual reproduction occurs by the formation of sex organs born on special branches.
The male antheridia are produced on antheridiophore and the female reproductive organs are 'archegonia'. They are borne on special stalked structures called archegoniophore. Both male and female sex organ may be present on same thalli or different thalli.
After fertilisation, the egg becomes zygote, which grow to form sporophyte. It is differentiated into foot, seta and capsule. Inside the capsule, the diploid spore mother cells divide by meiosis and produce haploid spores. These spores germinate to form free-living gametophytes

18 **(a)**
Elaters are hygroscopic and help in dispersal of spores.

19 **(a)**
On the basis of involvement of cells, sporangium development is of two types :

Leptosporangiate (only one cell takes part)

Eusporangiate (a group of cells takes part).

20 **(c)**
In ferns, sporangium consists of stalk and capsule, later is filled with sporocytes, which undergo meiosis to produce haploid spores. The one layered wall of the capsule is thin and has a strip of cells

called annulus. The cells of annulus have thickenings on the inner and radial walls but in some regions, its cells are thin walled. These regions are called stomium. Both annulus and stomium help in spore dispersion.

ANSWER-KEY										
Q.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
A.	**D**	**A**	**C**	**B**	**D**	**B**	**C**	**C**	**B**	**D**
Q.	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
A.	**C**	**D**	**A**	**C**	**D**	**D**	**D**	**A**	**A**	**C**