

Topic :- Plant Kingdom

- 1 (c)
Division- Angiospermae is sub-divided into two classes.
Class-Dicotyledonae and Monocotyledonae
Monocot have one cotyledon whereas dicot have two cotyledons
- 2 (d)
Pinus is **heterosporous**. The sporogenesis results in the formation of micro and megaspores representing the first gametophyte cells.
- 4 (a)
Calyptra is a covering developed from the ventre of archegonium in bryophytes and pteridophytes. It acts as a transpiration shield around the immature capsule and provides protection to the young capsule.
- 5 (b)
Species of *Sphagnum*, a moss, provides peat (fuel)
- 6 (d)
Sexual reproduction in *Spirogyra* is accomplished by conjugation, which involves the fusion of two morphologically identical but physiologically dissimilar gametes. The conjugation is of two types-lateral and scalariform conjugation. Lateral conjugation is rarely found and takes place between two adjacent cells of same filament (*i.e.*, homothallic species).
- 7 (c)
Gymnosperms are divided into three classes, *i.e.*, Coniferopsida, Cycadopsida and Gnetopsida. Lycopsidea and Pteropsida are related with pteridophytes, while Bryopsida is related to bryophytes.
- 8 (a)
Haploid endosperm is formed only in *Cycas* while apogamy is found only in *Pteris*.
- 9 (d)
Brown algae (*Laminaria*) are rich in sodium, potash and iodine. About 7% of total world production of iodine is obtained from kelps in Japan.
- 10 (d)
Algae reproduce by vegetative, asexual and sexual methods. The vegetative and asexual methods are abundant. Algae reproduce vegetatively by fragmentation and asexually by means

- of motile or non-motile spores. Sexual reproduction occurs through fusion of two gametes
- 11 **(d)**
In brown algae, sexual reproduction is isogamous (in *Ectocarpales*), anisogamous (in *Cutleriales*) and oogamous (in *Fucus*, *Laminaria*, *Dictyota*, etc). In most of the brown algae, the gametes are pyriform form and flagellated. Fertilisation is external, *i.e.*, the gametes fuse outside the gametangia in water
- 12 **(c)**
Sphagnum is commonly called as 'bog moss' or 'peat moss'.
- 13 **(a)**
In *Equisetum*, the anterior part of the antherozoid (sperm) is spirally coiled and has numerous flagella, whereas posterior part is somewhat expanded. The sperms of *Lycopodium*, *Riccia* and *Anthoceros* are biflagellated.
- 14 **(c)**
Angiosperms are divided into two classes dicotyledons and monocotyledons. Dicotyledons have two cotyledon in their seed and monocotyledon have one
- 15 **(a)**
Cycas seed is **dicotyledonous** and **endospermic**. In *Cycas*, fleshy female prothallus is called endosperm, which function as a food storage region of the seed.
- 16 **(c)**
In bryophytes each sperm usually consists of minute, slender, spirally curved body furnished with two long, terminal whiplash type flagella. The sperms are liberated from antheridia, swim in a film of water and attracted towards the archegonium. They enter into the archegonia and fertilise the egg and form zygote. Zygotes do not undergoes reduction division immediately. They produce a multicellular body called a sporophyte
- 17 **(d)**
Dryopteris, *Pteris* and *Adiantum* belong to class-Pteropsida of the division-Pteridophyta.
- 18 **(a)**
The 13-celled microspore of male gametophyte in *Selaginella* is shedded from microsporagium, which is having 1-prothallial cell + 8-jacket cells + 4-androgonial cells (*i.e.*, 8+4=12 antheridial cells).
- 19 **(b)**
In haplontic life cycle gametophyte is dominant and sporophyte is single celled zygote. Haplonts are
(i) Most fungi
(ii) Some green algae, *e.g.*, *Chlamydomonas*
(iii) Many Protozoa, *e.g.*, *Plasmodium*
- 20 **(a)**
Carrageenin is obtained from *Chondrus*.

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

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