

Topic :- Plant Kingdom

- 1 (b)
Pteridophytes are called vascular cryptogams because among cryptogams the vascular strands are present only in pteridophyte. All the vegetative parts possess vascular tissues (*i.e.*, xylem and phloem)
- 3 (c)
Sphagnum is employed for gauze to dress wounds and peat deposits are cut into blocks, dried and used as fuel.
- 4 (c)
Among plant imbibants phycocolloids, *e.g.*, Agar-agar are the best imbibants followed by protein, starch and cellulose.
- 6 (a)
Types of pigments present in the cell of algae is the most important character for classification.
- 7 (d)
Eichler (1883) divided plant kingdom into two sub-kingdoms.
Cryptogamae Plants having no flowers such as algae, fungi, bryophytes and pteridophytes.
Phanerogamae Plants having evident reproductive organs like flowers and seeds such as angiosperms and gymnosperms.
- 8 (a)
Calyptra is a small sheath of cells, derived from the archegonia, which covers top of the capsule.
- 9 (b)
A-Meiotically; B-Four
In gymnosperm megaspore differentiate to give rise to composite structure called ovule.
Megaspore mother cell divides meiotically to give rise four haploid megaspores
- 10 (a)
In *Cycas*, archegonia are present, while antheridia remain absent. In ferns and mosses, both archegonia as well as antheridia are present.
- 11 (b)
In angiospermic plant pollen grain reaches to embryo sac after its germination on stigma and through pollen tube

- 12 **(b)**
In bryophytes, gametophytic plant body is dominated over sporophytic. Sporophytes are depend on gametophytes. Bryophytes like *Polytrichum* have largest gametophyte.
- 13 **(a)**
Old pine (*Pinus*) stumps are still being distilled to some degree as a source of turpentine and resin.
- 14 **(c)**
During formation of male gametes from pollen grains, the ratio of equatorial division that takes place in *Cycas* and angiosperms is 2 : 1 respectively.
- 15 **(d)**
In moss, the sporophyte is differentiated into foot, seta and capsule
- 16 **(c)**
Sexual reproduction involves the formation of gametes and their fusion during the process called fertilisation. Depending upon the structure and behavior of gametes, there are different types of sexual reproduction. *These are*
- (i) **Isogamy** Fusion of morphologically alike gametes which look and behave similarly is called isogamy
 - (ii) **Anisogamy** Fusion of morphologically dissimilar gametes, which may be motile or non-motile
 - (iii) **Oogamy** Fusion of a large non-motile egg or ovum with a smaller motile sperm (except in Rhodophyceae). The fusion of gametes is called oogamy
- 17 **(d)**
Sexual reproduction I *Spirogyra* takes place by conjugation. Scalariform conjugation occurs between the cells belonging to different filaments. Hence, these species are heterothallic. Lateral conjugation is primitive than scalariform conjugation.
- 18 **(d)**
An ideal embryo sac contains 7-cells and 8-nuclei. 3 cells are present at the micropylar end and form egg apparatus, mid of which forms egg cell and rest two lateral form synergids. One cell present in the centre of embryo sac, known as central cell and contains two nuclei and rest three cells are present at chalazal end for antipodal cells
- 19 **(a)**
During fertilisation in plants, one male gamete fuses with the egg cell and forms the zygote (this process is called syngamy). The other male gamete fuses with the secondary nucleus (this is called triple fusion). The syngamy and triple fusion together are called double fertilisation
- 20 **(b)**
Style, stigma and pistil.
Female sex organ is carpel also known as pistil or gynoecium. It consist of three parts style, stigma and ovary

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

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