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B.Sc. PART I SUB / GEN
CORE CONCEPT OF PTERIDOPHYTA
SALIENT FEATURES —

7. The spores germinate to give rise to completely independent gametophytic plant (Prothallus).
8. In homosporous pteridophytes, the gametophytes are monoecious and exosporic.
9. In heterosporous pteridophytes the gametophytes are diecious, the microspores producing ♂ gametophytes bearing only antheridia and the megaspores producing ♀ gametophytes bearing archegonia. The gametophytes are endosporic.
10. The antheridia produce flagellated antherozoids while the archegonia besides N.C.C and V.C.C produce an egg.
11. Fertilization takes place in the presence of water and results in the formation of zygote.
12. The zygote divides and redivides mitotically to give rise to the

sporophyte.

13. Apart from the regular alternation of the gametophytic and sporophytic generations, the pteridophytes may also show two other phenomena in the life cycle. These are —

1. Apogamy: — The development of a sporophyte directly from the gametophyte without fertilization. These sporophytes thus have the same haploid chromosome number as the gametophyte (n).

2. Apospory: — The development of gametophyte directly from the vegetative parts of the vegetative sporophyte without intervening meiosis. Such sporophytes have $2n$ chromosomes.

Classification: — Pteridophytes have been divided into four divisions —

1. Psilophyta

2. Lycophyta

3. Arthrophyta

4. Filicophyta