**GSE/M-20**                              **1487**

### BOTANY
#### (Diversity of Archegoniates)
#### Paper–I

Time : Three Hours]                      [Maximum Marks : 40

**Note :** Attempt *five* questions in all, selecting *two* questions from each unit. Question No. 1 is compulsory. Illustrate your answers with suitable diagrams.

### Compulsory Question

1. Answer briefly :

   (a) What are leptoids?

   (b) Name the *two* types of scales present in *Marchantia* thallus.

   (c) Name the central sterile tissue present in the capsule of *Anthoceros.*

   (d) Define Apospory.

   (e) Differentiate between leptosproangiate and eusporangiate type of sporangia in pteridophytes.

   (f) Why are pteridophytes known as vascular cryptogams.

   (g) What are resurrection plants? Give an example.

   (h) Name *two* identified species of *Rhynia.*        (8×1=8)

## UNIT–I

**2.** Write brief notes on :

    (a) V.S. of thallus of *Marchantia.*

    (b) Gemmae of *Marchantia.*

    (c) Antheridiophore of *Marchantia.*       (3+2+3)

**3.** Give a comparative account of the sporophyte of *Marchantia* and *Anthoceros.*       8

**4.** Write brief notes on :

    (a) Androecia of Anthoceros.

    (b) Male receptacle of *Funaria.*       (4+4)

**5.** Write brief notes on :

    (a) Peristome teeth.

    (b) Protonema of *Funaria.*

    (c) Archegonium of Bryophytes.

    (d) T.S. of stem axis of *Funaria.*       (2+2+2+2)

## UNIT–II

**6.** Write brief notes on :

    (a) Anatomy of stem of *Selaginella.*

    (b) Germination of megaspore in *Selaginella* leading upto the stage of fertilization.       (4+4)

**7.** Write brief notes on :

   (a)  Structure of sporangiferous spike of *Selaginello.*

   (b)  Spores of *Equisetum.*

   (c)  Xerophytic characters of *Equisetum* anatomically and morphologically.                    (4+2+2)

**8.** Write brief notes on :

   (a)  Strobilus of *Equisetum.*

   (b)  Draw the diagram of V.T.S. of leaflet (fertile) of *Pteris.* Add a brief note on the main features of it.

   (c)  Differentiate between siphonostele and dictyostele.

                                        (4+3+1)

**9.** What do you understand by alternation of generation? Discuss it with reference to life history of *Pteris.*          8

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