M 8780

Reg. No. : .....

Name : .....

II Semester B.Sc. Degree (CCSS-2014 Adm. – Regular) Examination, May 2015
Complementary Course in Botany/Plant Science
2C02 BOT/PLS : ARCHEGONIATAE, PALAEOBOTANY AND REPRODUCTION IN ANGIOSPERMS

Time : 3 Hours Total Marks : 32

SECTION – A

Answer **all**.

1. The endosperm in angiosperms is derived from
   a) Secondary nucleus b) Triploid fusion nucleus
   c) Zygote d) Egg
2. Trabeculate endodermis is seen in
   a) *Cycas* b) *Funaria* c) *Selaginella* d) *Riccia*
3. *Cycas* has
   a) Rhizophores b) Nurse cells
   c) Coralloid roots d) Calyptra
4. Nutritive tissue of the microspores
   a) Nucellus b) Endosperm
   c) Tapetum d) All of the above
5. Scutellum is part of
   a) Dicot embryo b) Ovule
   c) Monocot embryo d) Stamen **(5×1=5)**

P.T.O.

SECTION – B

(Answer **any four**).

6. Explain the thallus anatomy in *Riccia*.
7. With a neat labelled diagram explain the morphology of *Selaginella* sporophyte.
8. Differentiate between the rhizoids of *Riccia* and *Funaria*.
9. Explain protonema.
10. Write short notes on the different types of fossils.
11. Give the structure of the 8 nucleate monosporic embryo sac. **(4×2=8)**

SECTION – C

(Answer **any three**).

12. Explain the strobilus structure in *Selaginella*.
13. Discuss the structure and function of the peristome.
14. Give the post fertilisation changes in *Riccia*.
15. *Cycas* leaf is used for decorative purposes. Why ?
16. The nucellar cell of an ovule has chromosome number 20. What would be the chromosome number of the following ?
    a) egg
    b) zygote
    c) synergids
    d) antipodals
    e) endosperm
    f) secondary nucleus. **(3×3=9)**

SECTION – D

(Answer **any two**).

17. With the help of suitable diagrams discuss microsporogenesis and development of the male gametophyte in angiosperms.
18. Explain the morphology of Lepidodendron with the aid of diagrams and add a note on the stigmarian system.
19. Illustrate and describe the alternation of generation in *Funaria* with schematic representations.
20. Discuss sexual reproduction in *Cycas* and how the sporophytic generation alternates with the gametophytic generation in its life cycle. **(2×5=10)**