SECTION – E

Answer **any one**.

(**Long** essay type questions. **Each** question carries a weightage of **4**.)

27. Describe the alternation of generation in the life cycle of Selaginella.

28. Explain the classification of bryophytes. Give the important features of the major classes.

29. Explain briefly the life cycle of marchantia. **(1×4=4)**

M 6361

Reg. No. : .....

Name : .....

IV Semester B.Sc. Degree (CCSS-Regular/Suppl./Improv.) Examination, May 2014
CORE COURSE IN BOTANY/PLANT SCIENCE
4B04 BOT/PLS : Diversity of Life – 2 : Bryology, Pteridology and Gymnosperms
(2012 Admn.)

Time : 3 Hours Total Weightage : 30

Instruction : *Draw diagrams* ***wherever*** *necessary.*

SECTION – A

Answer **all**.

(Questions in Bunches of **four**. **Each** bunch carries a weightage of **1**.)

1. Choose the correct answer :
   i) The gametophytic plant body of one of the following has the presence of Nostoc
      a) Marchantia b) Anthoceros
      c) Funaria d) Riccia
   ii) Trabeculae is seen in association with the stem of
      a) Equisetum b) Marsilea
      c) Selaginella d) Cycas
   iii) One of the following is considered as living fossil
      a) Gnetum b) Pinus
      c) Cycas d) Equisetum
   iv) Pollination occurs in gymnosperms through the agency of
      a) Water b) Wind
      c) Insects d) Birds

2. State **true** or **false** :
   i) Railway sleepers are made from deodar wood.
   ii) Coralloid roots are seen in Marsilea.
   iii) Prothallus is free living and heart shaped in Nephrolepis.
   iv) In Psilotum the spore bearing organs are called synangia.

3. Fill in the blanks :
   i) Pavement tissue seen in the female gametophyte of gnetum is concerned with _____
   ii) Resin and turpentine are obtained from _____
   iii) In equisetum lateral roots take origin from the _____
   iv) In Marsilea sporangia are produced within special structures called _____

4. Answer in **one** word or in **one** sentence :
   i) Tuberculate rhizoids
   ii) Peristomial teeth
   iii) Ligule
   iv) Chilgoza.

5. Match the following :

A	B	C
i) Carinal canal	Marsilea	Horsetails
ii) Trabeculae	Pinus	Aquatic fern
iii) Winged pollen	Selaginella	Sulfur dust
iv) Sorophore	Equisetum	Resurrection plant

(5×1=5)

SECTION – B

Answer **any four**.

(Differentiate the following. **Each** question carries a weightage of **1**.)

6. Manoxylic and pycnoxylic wood
7. Carinal canal and vallecular canal
8. Protonema and prothallus
9. Homospory and heterospory
10. Apophysis and apospory
11. Eusporangiate and leptosporangiate.

(4×1=4)

SECTION – C

Answer **any five**.

(**Short** answer questions. **Each** question carries a weightage of **1**.)

12. Leaf dimorphism seen in pinus.
13. Write a brief account on lepidocarpon.
14. Describe the structure of gemma in marchantia.
15. Endosperm of pinus is haploid why ?
16. What are the major differences shown by the plant bodies of Funaria and Selaginella ?
17. Describe the morphological features of rhizophore of Selaginella.
18. What is perichaetium ?

(5×1=5)

SECTION – D

Answer **any six**.

(**Short** essay questions. **Each** question carries a weightage of **2**.)

19. What are the important similarities and differences among gymnosperms and angiosperms ?
20. Describe the structure of ovule of Cycas.
21. Explain the internal structure of Selaginella stem.
22. Describe the structure of capsule of Funaria.
23. Explain the sexual reproduction in Riccia.
24. Describe the structure of prothallus of equisetum.
25. Describe the resemblances of bryophytes with pteridophytes.
26. Explain the structure of male gametophyte of gnetum.

(6×2=12)