



23. Explain the vegetative reproduction and development of synangium in Psilotum.
24. Explain the economic importance of bryophytes.
25. Give the important features of the class Coniferopsida.
26. Enumerate the differences between bryophytes and pteridophytes. (6×2=12)

SECTION – E

(Essay type question ; Answer **any 1**, **each** question carries a weightage of **4**) :

27. Explain the structure of male and female cones of Pinus with the help of diagrams.
28. Discuss the classification of bryophytes. Write the important features of the major classes.
29. Briefly describe the alternation of generation in Selaginella. (1×4=4)



Reg. No. :

Name :

V Semester B.Sc. Degree (CCSS – Reg./Sup./Imp.)
Examination, November 2014
CORE COURSE IN BOTANY/PLANT SCIENCE
5B09 BOT/PLS – Diversity of Life – 2
Bryology, Pteridology and Gymnosperms
(2011 and Earlier Admissions)

Time : 3 Hours

Max. 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 generation is dominant in the
- | | |
|----------------|------------------|
| a) Gymnosperms | b) Pteridophytes |
| c) Angiosperms | d) Bryophytes |
- ii) Winged pollen grains are present in
- | | |
|-----------|-------------|
| a) Riccia | b) Marsilea |
| c) Pinus | d) Gnetum |
- iii) A pteridophyte that produces synangium.
- | | |
|--------------|-------------|
| a) Marsilea | b) Psilotum |
| c) Equisetum | d) Pteris |
- iv) Algal zone is present in the
- | | |
|-----------------------------|-------------------------|
| a) Coralloid roots of Cycas | b) Normal root of Cycas |
| c) Leaflets of Cycas | d) Stem of Cycas |



2. State **true** or **false** :

- i) Bryophytes are known as amphibians of the plant kingdom.
- ii) Selaginella is commonly known as resurrection plant.
- iii) In gymnosperms pollination is entomophilous.
- iv) Polyembryony occurs in Pinus.

3. Fill in the blanks :

- i) The blue green alga in the thallus of Anthoceros is _____
- ii) _____ era is known as age of pteridophytes.
- iii) Seeds of Pinus gerardiana are edible and known as _____
- iv) Bi sporangiate sporocarp is found in _____

4. Match the following :

A	B
i) Anthoceros	Liver worts
ii) Equisetum	Sago palm
iii) Riccia	Horn worts
iv) Cycas	Horse tail

5. Answer in **one** word or in **one** sentence :

- i) Siphonogamy
- ii) Sporocarp
- iii) Protonema
- iv) Protostele.

(5×1=5)

SECTION – B

Answer **any 4** of the following (**Each** question carries a weightage of **1**) :

6. Circinate vernation
7. Rhizoids in Riccia

8. Transfusion tissue
9. Vallecular canals
10. Peristomial teeth
11. Bars of Sanio.

(4×1=4)

SECTION – C

(Short answer questions ; Answer **any 5**, **each** question carries a weightage of **1**) :

Differentiate the following :

12. Simple rhizoids and tuberculate rhizoids
13. Eusporangiate and leptosporangiate
14. Manoxylic wood and pycnoxylic wood
15. Homosporous and heterosporous
16. Carinal canal and vallecular canal
17. Rhizophore and sorophore
18. Plectostele and actinostele.

(5×1=5)

SECTION – D

(Short answer questions : Answer **any 6**, **each** question carries a weightage of **2**) :

19. Write the similarities and differences among gymnosperms and angiosperms.
20. Describe the anatomical details of rhizophore in Selaginella.
21. Explain the structure of Pinus needle.
22. Describe the internal structure of the thallus of Riccia.