BankimSardar College

B.Sc. Honours SemesterII Examination

2020

Botany Honours

Paper: ARCHAEGONITEA (CC4)

Class Attendance: 10 Marks

Time: 2 Hours **Full Marks: 90**

Answer of each group should be in separate answer sheet

Group: A

(All questions are compulsory)

1.Answer all questions. **[1 X 10 = 10]**

a. Which of the following is deemed to be vital in the development of seed habit
i. Heterospory
ii. Dependant sporophyte
iii. Free living gametophye
iv. Haplontic life cycle

b. Sporophyte of *Pteris*
i. Is independent of gametophyte from the beginning
ii. Is dependent on the gametophyte only in the beginning
iii. Supplies water and inorganic salt to the gametophyte
iv. None of these

c. Evolutionary important character of *Selaginella* is
i. Heterosporous nature
ii. Rhizophore
iii. Strobili
iv. Ligule

d. *Equisetum* is commonly called as
i. Horsetail
ii. Club moss
iii. Spike moss
iv. Bog moss

e. Coralloid roots are found in
i. *Cycas*

ii. *Pinus*
iii. *Gnetum*
iv. None of the above

f. The megasporium is also known as
i. Nucellus
ii. Ovule
iii. Fruit
iv. Micropyle

g. Which of the following gymnosperm is devoid of archegonium
i. *Gnetum*
ii. *Cycas*
iii. *Pinus*
iv. None of the above

h. Sporogenous tissue (archesporium) is formed from the amphithecium in
i. *Anthoceros*
ii. *Marchantia*
iii. *Funaria*
iv. None of the above

i. Function of elaters is
i. Spore dispersal
ii. To provide support
iii. Conduction of sap
iv. Absorption of food

j. A bryophyte which harbours a nitrogen fixing blue-green alga in its thallus is
i. *Anthoceros*
ii. *Marchantia*
iii. *Funaria*
iv. None of the above

Group B
(Attempt all questions)

[10 X 3 = 30]

2. **a**. Give the identifying features of V.S. of thallus with sporophyte of *Riccia*.**[5]**

b. Give the identifying features of L.S. through gemma cup of *Marchantia* .**[5]**

3. **a.**Give the identifying features of L.S. of spike of *Ophioglossum*. **[5]**

b.Give the identifying features of L.S. of sporocarp of *Marsilea*. **[5]**

4. **a**. Give the identifying features of L.S. of ovule of *Cycas.* **[5]**

b. Give the identifying features of L.S. of male cone of *Pinus*. **[5]**

Group C

5. Attempt all questions **[10 X 2 = 20]**

a. Distinguish between Homoephyllum and Heterophyllum*Selaginella*

b. What is the difference between elaters and pseudoelaters?

c.Name two Indian species of *Marchantia*.

d.What is a peristome tooth? Give Example.

e. What is the difference between microphylls and megaphylls?

f. Give two differences between eusporangiate and leptosporangiatepteridophytes.

g.What is Telome?

h. What is Green oil charity?

i. What is the difference between manoxylic and pycnoxylic wood?

j. What is the difference between haploxylon and diploxylonpines?

6. Attempt any 6 questions **[6 X 5 = 30]**

a. Discuss the diagnostic characteristics of gnetophyta. Give example.

b. Discuss the use of gymnosperm as drug.

c.Discuss the T.S. of *Pteris*rhizome.

d. Discuss the origin of seed habit.

e. Discuss the utilization of pteridophytes as medicine.

f.Describe the structure of sporophytes of *Funaria* with sketches.

g.Draw and label a transverse section through an internode of *Equisetum* stem and mention only its dissimilarity from that of a nodal section.

h. Discuss the pteridophytic origin of bryophytes.