WEST BENGAL STATE UNIVERSITY

B.Sc. Honours 2nd Semester Examination, 2019

BOTACOR04T-BOTANY (CC4)

Time Allotted: 2 Hours

Full Marks: 40

The figures in the margin indicate full marks.
Candidates should answer in their own words and adhere to the word limit as practicable.
All symbols are of usual significance.

1. Answer briefly:

1×6 = 6

(a) What is amphigastria?

(b) What do you mean by eusporangiate type of sporangial development?

(c) What is mixed type of sorus?

(d) If the chromosome number in the leaf of *Funaria* is 10, what will be the chromosome number in the spores?

(e) Name a gymnosperm with manoxylic wood.

(f) How the phloem of gymnosperm differ from angiosperm?

2. Answer any *eight* questions from the following:

3×8 = 24

(a) Write a brief note on the adaptations needed for transition to land habit.

(b) State with reasons, which class is more advanced among Hepaticopsida and Bryopsida.

(c) State the distinctive feature of *Sphagnum* leaf.

(d) Draw a labelled diagram of L.S. of the archegoniophore highlighting the parts of archegonium.

(e) Name one fossil pteridophyte and its identifying characters.

1+2

(f) Draw and describe the spore producing structure of *Psilotum*.

1+2

(g) What is the contribution of seed habit of pteridophytes in the evolution of seed plant?

(h) Distinguish between perigynium and calyptra.

(i) Why are the female cones of *Cycas* not considered as true cones?

(j) Comment on the ovule of *Gnetum*.

(k) Name the plant yielding Canada balsam. Mention two economic importance of *Pinus*.

1+2

(l) Draw and label the longitudinal section of *Equisetum* cone.

(m) What is the fate of amphithecium and endothecium in classes Hepaticopsida and Anthocerotopsida?

3. Answer any *two* questions from the following:

5×2 = 10

(a) Give the ecological and economical significance of *Sphagnum*.

3+2

(b) Draw a labelled diagram of the longitudinal section of the capsule of *Funaria*. Explain the role of peristome in the dispersal of the spores.

3+2

(c) Write a note on the stelar evolution of pteridophytes with examples.

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(d) What is sulphur dust of *Pinus*? Describe with labelled diagram the longitudinal section of female cone of *Pinus*.

1+2+2

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