

2018

2nd Semester

BOTANY

(Honours)

PAPER—C4P

(Practical)

Full Marks : 20

Time : 2 Hours

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

[Instructions to Examiners]

1. **For specimen 'A'** — Any two specimens should be selected from the following Bryophytes with their reproductive structures and supply alternately to the candidates of the same batch.
 - (a) Antheridiophore of *Marchantia*.
 - (b) Archegoniophore of *Marchantia*.

(c) Only capsule of *Anthoceros*.

(d) Only capsule of *Funaria*.

2. For specimen 'B' — Any two specimens should be selected from the following pteridophytes with their reproductive structures and supply alternately to the candidates of the same batch.

(a) Strobilus of *Selaginella*.

(b) Strobilus of *Equisetum*.

(c) Leaf i.e. sporophyll of *Pteris*.

3. For specimen 'C' — One specimen should be selected either from the following bryophytes or from the following pteridophyte.

Bryophytes (Permanent slide)

(a) V.S. of the thallus of *Riccia*.

(b) V.S. of the thallus through gemma cup of *Marchantia*.

(c) L.S. of the sporophyte of *Pellia* or *Porella*.

(d) Whole mount of leaf.

Pteridophytes (Permanent slide)

- (a) T.S. of synangium of *Psilotum*.
- (b) T.S. of the stem of *Selaginella*.
- (c) T.S. of the stem of *Equisetum*.
- (d) T.S. of the rhizome of *Pteris*.

For specimen 'D'

One specimen should be selected from the following reproductive structure of gymnosperms.

- (a) L.S. of the ovule of *Cycas*.
- (b) L.S. of the male cone of *Pinus*.
- (c) L.S. of the female cone of *Pinus*.
- (d) V.S. of the ovule of *Gnetum*.

For specimen 'E'

One specimen should be selected from the following vegetative structure of gymnosperms.

- (a) T.S. of the leaflet of *Cycas*.
- (b) T.S. of coralloid root.
- (c) T.S. of the needle of *Pinus*.
- (d) T.S. of stem of *Gnetum*.

4. Candidates should submit the Laboratory note book, field note book duly signed by the teacher(s).
 5. Separate loose sheets should be used for Q. No. 3.
 6. Practical scripts to be evaluated immediately after examination and marks of the same to be submitted in time.
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Illustrate the answers wherever necessary.

Answer all questions.

1. Make a temporary preparation of the supplied specimen 'A'. Draw, label, describe and identify the genus of the specimen with reason. 6

*[Preparation-1, Drawing & labelling-2,
Description-2, Identification with reason-1]*

2. Make a microscopic preparation of the supplied specimen 'B'. Draw, label, describe the reproductive structure and identify the genus of the specimen with reason. 6
[Preparation-1, Drawing & labelling-2, Description-2, Identification with reason-1]
3. Identify the Genera of the specimen 'C', 'D' and 'E' with reasons. 1×3
4. (a) Laboratory Note Book. 2
 (b) Field Note Book. 1
5. Viva-voce. 2
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