

NEW
Part-III 3-Tier
2019

BOTANY
(Honours)
PAPER—VII
(PRACTICAL)

Full Marks : 100

Time : 6 Hours

[Instructions to the Examiners]

1. For specimen 'A' each batch of candidates two specimens with flowers should be selected from the dicotyledonous families as prescribed in the syllabus. Alternate specimens should be given to the candidates of the same batch.
2. (a) For specimen 'B' select any two of the following as crude drug power [*Alstonia* sp. bark, *Adhatoda* sp. leaf, *Zingiber* sp. rhizome and *Strychnos* sp seed] should be supplied alternately to the candidates of the same batch.
(b) For specimen 'C' powder of *Terminalia chebula* for Tannis and powder of leaf or whole plant of *Catharanthus roseus* for alkaloid should be given alternately batchwise. At least two chemical tests should be performed for tannin or *alkaloids*.

(Turn Over)

3. (a) For specimen 'D' select any two of the following specimens and allotted to the candidates alternately for each batch.

Root : *Vanda sp.* ; *Tinospora sp.* ;

Stem : *Bignonia sp.* ; *Tecoma sp.* *Boerhavia sp.*
Dracaena sp.;

Leaf : *Bambusa sp.* and *Nerium sp.*

- (b) For specimen 'E' select any two for wood anatomy the following specimens and allotted alternately batchwise.

Wood block of *Tectona grandis*, *Mangifera indica* and *Azadirachta indica*.

4. (a) For sample space 'F' [Question No. 4(a)] site of rich ecological diversity should be selected for the quadratic study.

- (b) For specimen 'G' Ecological identification any one of the following specimen should be selected for each batch.

Root of *Eichhornia crassipes*, stem of *Ipomoea betatus* and leaf of *Peperomia pellucida*.

5. (a) For specimen 'H', 'I', 'J' and K, any four angiospermic flowering twigs (other than those selected for Question No. 1) one each from different families as per theoretical syllabus should be selected. Among them one specimen must be selected from monocotyledous.

- (b) For the palaeobotanical identification the following specimens ('L' and 'M') should be used batchwise alternately from the following :

Lyginopteris T.S., T.S. of *Calamites* stem, *Lepidocarpon* and *Vertibraria*.

- (c) Specimen 'N' and 'O' should be selected from the following specimens. One specimen must be macroscopic and other will be microscopic

Macroscopic specimens :

- (i) Male cone of *cycas* or Microsporophyll of *cycas*.
- (ii) Megasporophyll of *cycas*.
- (iii) Female cone of *Pinus*.

Microscopic specimens :

- (i) T.S. of coralloid root of *cycas*.
- (ii) L.S. of Male cone of *Pinus* sp.
- (iii) L.S. of Ovule of *Gnetum*.

- (d) For specimen 'P' Pollens of *Hibiscus* sp. and *Tridax* sp. should be supplied. [Pollens collected from other members of family Malvaceae and Asteraceae can also be used for this purpose]
6. (a) For Herbarium sheets submission, atleast 20 Dicots and 5 monocots specimens are to be submitted. The arrangement of the sheets should follow Bentham and Hooker's system of classification.
- (b) Laboratory Note Books should be assessed considering the regular endorsement of Teachers in practical record books.
- (c) Field Note Book including tour diary must be endorsed by the concerned teachers.

- (d) Permanent slides as prepared during practical classes should be submitted.
7. Viva-Voce : Examiners should ask different questions related to practical as well as theoretical aspects.

[Special Notes]

1. Evaluation should always show part markings and should be done jointly by all the examiners.
 2. All loose-sheets should bear signatures of all the examiners.
 3. All list of (key to) specimens allotted to each batch should accompanied with the answer-scripts (batchwise). The list should bear full signatures of all the examiners.
 4. Marks and answer-scripts packets along with remuneration bills (in separate envelope) should be sent to Head Examiner.
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