

2019
Part – II
BOTANY
(Honours)
Paper – V
(Practical)

Full Marks – 100

Time : 6 Hours

Instructions to the Examiners

1. Specimen 'A' Bacterial suspension/Curd should be supplied to all students of a batch.
2. For each batch of candidates two specimens (B) with reproductive structures should be selected. Alternate specimens should be supplied to the candidates of the same batch from the following algae :
Oedogonium Spp.—Macradrous thallus with oogonium.
Chara Spp.—Thallus with nucule and globule.
Voucheria Spp.—with sex organs
Ectocarpus Spp.—Thallus with gametangia/
Sporangia
Polysiphonia Spp.—Thallus with Cystocarp/
Tetrasporangia

3. Any two specimens (C) of the following fungi with reproductive structures should be selected and supplied alternately to the candidates of the same batch :

Rhizopus Spp.—Thallus with sporangia and zygospore

Penicillium Spp. – Thallus with conidia

Ascobolus Spp. – Fruit body

Agaricus Spp. – Mature basidiocarp

4. Annexure – I :

Specimen 'D'—any one specimen from the part of syllabus, hence in below, be supplied alternately to the candidates of the same batch.

Identification of causal organism by cutting section of diseased plant parts—Black stem rust of wheat (uredospore, teleutospore); Brown spot rice; Tikka disease of ground nut.

5. Specimen 'E'— Any two specimen should be selected and supply alternately to the candidates of the same batch from the following Bryophytes :

Riccia Spp.—Thallus with sporophyte

Marchantia Spp. –Thallus with Antheridiophore/
Archegoniophore

Anthoceros Spp. – Gametophyte thallus bearing sporophyte

Funaria Spp – Thallus with sporophyte

6. Specimen 'F' – Any two specimen should be selected and supplied alternately to the candidates of the same batch from the following pteridophytes :

Lycopodium Spp.

Selaginella Spp.

Equisetum Spp.

Marsilea Spp.

Adiantum Spp.

Supply the suitable sized plants with reproductive structure.

A card from a batch must be drawn by each candidate. A separate sheet should be provided to them for the work (Plant Pathology) as instructed in the drawn card. Each card must contain one of the following instructions (a or b) :

- (a) Demonstrate the sub-culturing techniques and submit your requisition slip before demonstration.

Requisition 2

Demonstration 3

- (b) Work out the specimen 'F', identify the disease and the causal organism, leave your preparation.

Label drawing 2

Identification with reason 2

Slide preparation 1

* Candidates must submit requisition slip before demonstration. PDA stand, any stock culture of a fungus and the demanded equipments are to be supplied after the submission of the requisition slip.

** Specimen 'F' – Any two specimen should be provided to all the candidates of the same batch from the following :

Brown spot of rice – infected leaves.

Black stem rust of wheat (uredospore/teleutospore) – infected leaves.

Tikka disease of ground nut – infected leaves.

7. Any three permanent slides/microscopic materials from specimens 'J', 'K' and 'L' from the following groups (not more than one from any group) :

Algae : (Excepting the specimen 'B')

(a) For morphological studies any two specimens (canna flower, calotropis flower, nymphaea flower; inflorescence of tridax Sp. eupatorium Sp. and Oryzia Sp.) should be selected alternately for each batch of examinees.

(b) For morphological comments any three specimens should be selected for each batch from the following items :

Inflorescence, stipules, cohesion and adhesion of stamens and carpels, fruits, and modification of leaves.

Anabaena – Thallus with akinete/heterocyst

Oedogonium – with oogonia/antheridia/dwarf male

Chara – with sex organs

Vaucheria – Thallus with sex organs

Ectocarpus – Unilocular/Plurilocular Sporangia

Polysiphonia – Cystocarp/Spermatangia/Tetrasporangia

Fungi : (Excepting the specimen 'C')

Rhizopus – Sporangia/Zygosporangium

Penicillium – Conidiophore and conidia

Ascobolus – V.S. of ascocarp.

Agaricus – Section through the gills showing basidia and basidiospores.

Bryophyta : (Excepting the specimen 'D')

Riccia – V. S. through antheridia/archegonia.
T.S. through sporophyte bearing thallus.

Marchantia – V. S. through Antheridiophore/
Archegoniospore/ Gemma Cup.

Anthoceros – V.S. through antheridia /
sporophyte

Funaria – L. S. of capsule/T.S. of
gametophyte.

Pteridophyte : (Excepting the specimen 'E')

Lycopodium – T. S. of stem/L. S. of Strobillus.

Selaginella – T. S. of stem/L. S. of strobillus

Equisteum – T. S. of stem/L. S. of strobillus

Marsilea – L.S./T.S of sporocarp.

8. Laboratory Note books, Field Note book and Records should be properly signed by the concerned teachers.
 9. Examiners should ask any question related to practical and theoretical syllabus (for Question No. 12)
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General Instructions

1. Nobody except the examiners are allowed to enter the examination hall after the commencement of examination. When required, Laboratory attendants/assistants must do their jobs in presence of examiner(s) only.
2. Repetition of specimens in the very next day should be avoided as far as practicable.
3. Evaluation should always show part marking and should be done jointly by all the examiners.
4. A list of specimens allotted to each batch should accompany the answer scripts (batch-wise). The list should bear the signature and full names (in block letters) of all the examiners.
5. Separate loose sheets should be used for Q. No. 7(b) and Q. No. 8.
6. Answer scripts and all loose sheets should bear the signature of the examiner.
7. Marks should be sent in the printed award sheets supplied by the University and in separate sealed covers.

8. Answer scripts should be sent in separate sealed cover.
9. Marks and answer scripts in sealed packets should be sent by internal examiner messenger to the Head examiner/Co-ordinator at his/her residence or official address, within two weeks after examination.
10. Remuneration bills should be sent along with the answer scripts in a separate cover.
