

QUESTION BANK

FOR

INTERMEDIATE PRACTICAL EXAMINATION

IN

**BOTANY**

(For the Academic Year 2020-21)



TELANGANA STATE  
BOARD OF INTERMEDIATE EDUCATION (TSBIE)  
HYDERABAD

INTERMEDIATE PUBLIC EXAMINATIONS  
**BOTANY (Practicals)**  
Question Paper with Scheme of Valuation  
(For the Academic Year 2020-2021)

Time: 3 Hrs.

Max. Marks: 30

- I. Describe vegetative and floral characters of the given twig 'A' in technical terms. Draw labelled diagrams of the twig with inflorescence and L.S. of flower. Give floral diagram and floral formula. Identify its family.

**Marks : 06**

Technical description of vegetative characters	-	1 Mark
Technical description of floral characters	-	2 Marks
Identification of the family	-	1 Mark
Floral formula	-	½ Mark
Floral diagram	-	½ Mark
Labelled diagrams of Twig with inflorescence	-	½ Mark
L.S. of flower	-	½ Mark

- II. Take T.S. of the given material 'B. Stain, mount and leave the preparation for evaluation, Identify it and draw a well labelled diagram (Sector only). (No need to write identification characters)

**Marks : 06**

Preparation of slide	-	3 Marks
Identification	-	1 Mark
Labelled diagram (Sector only)	-	2 Marks

- III. Experiment 'C'
- |  |   |         |
|--|---|---------|
| - Performing the experiment  | - | 3 Marks |
| - Writing the Aim, Principle, Observation and Inference/<br>result (no need to write procedure and no need to<br>draw diagram) | - | 3 Marks |

(½ + 1 + 1 + ½)

- IV. Identify D, E, F, G, H giving reasons (**D Only deleted**) **Marks : 04**  
(Diagrams are not needed) (Each 1 mark)
- Identification - ½ Mark
- Reasons - ½ Mark
- V. Record and Herbarium **(Marks : 08)**
- Record (Based on I and II Year Practical Syllabus) - 5 Marks
- Herbarium (Minimum of 10 herbarium sheets  
representing the Families included in the syllabus) - 3 Marks

## Intermediate Botany Practical Question Bank

- I. A. **PLANT TAXONOMY (వృక్ష వర్గీకరణశాస్త్రం)**
1. Fabaceae - *Tephrosia purpurea* **(DELETED)**  
ఫాబేసి - టెఫ్రోషియా పర్పూరియా
  2. Solanaceae - *Datura metel*  
సొలనేసి - దతుర మెటల్
  3. Liliaceae - *Allium cepa*  
లిలియేసి - ఆలియమ్ సెపా
- II B. **ANATOMY (అంతర్నిర్మాణశాస్త్రం)**
4. T.S. of Dicot stem ( Primary)  
ద్విదళబీజ కాండం అడ్డుకోత (ప్రాథమిక)
  5. T.S. of Monocot stem  
ఏకదళబీజ కాండం అడ్డుకోత
  6. T.S. of Dicot root (Primary)  
ద్విదళబీజ వేరు అడ్డుకోత (ప్రాథమిక)
  7. T.S. of Monocot root  
ఏకదళబీజ వేరు అడ్డుకోత
- III C. **Live Experiments (లైవ్ ప్రయోగాలు)**
8. The four experiments have to be alternated among the students (by lots) in the examination such that every student has to do one experiment.

పరీక్షలో నాలుగు ప్రయోగాలలోని ఒక ప్రయోగాన్ని ప్రతీ విద్యార్థి లాటరీ ద్వారా ఎన్నుకొని చేయాలి.

i) Demonstrate the osmosis by potato osmoscope. Write the aim, principle, observation and inference / result. **(DELETED)**

పొటాటో ఆస్మోస్కోప్ ద్వారా ద్రవాభిసరణ ప్రయోగాన్ని నిరూపించండి. ఉద్దేశం, సూత్రం, పరిశీలన, అనుమితి/ ఫలితాన్ని రాయండి.

ii) Study of plasmolysis in epidermal peel of leaf. Write the aim, principle, observation and inference / result. **(DELETED)**

పత్ర బాహ్యచర్మ పొర ద్వారా కోశిక ద్రవ్య సంకోచాన్ని అధ్యయనం చేయండి. ఉద్దేశం, సూత్రం, పరిశీలన, అనుమితి/ ఫలితాన్ని రాయండి.

iii) Demonstrate the transpiration by cobalt chloride paper method. Write the aim, principle, observation and inference/ result. **(DELETED)**

కోబాల్ట క్లోరైడ్ కాగితం పద్ధతి ద్వారా బాష్పోత్సేకాన్ని నిరూపించండి. ఉద్దేశం, సూత్రం, పరిశీలన, అనుమితి/ ఫలితాన్ని రాయండి.

iv) Separate chloroplast pigments by paper chromatographic technique (No need to determine Rf values). Write the aim, principle, observation and inference / result.

హరితరేణువులోని వర్ణద్రవ్యాలను పేపరు క్రోమటోగ్రఫీ సాంకేతిక ప్రక్రియ ద్వారా వేరు చేయండి (Rf విలువలను నిర్ణయించవలసిన అవసరం లేదు). ఉద్దేశం, సూత్రం, పరిశీలన, అనుమితి/ ఫలితాన్ని రాయండి.

#### IV. D. Vegetative Morphology (శాకీయ స్వరూప శాస్త్రం)

9. Storage root : Carrot **(DELETED)**

నిల్వచేసే వేరు

కారట్











Changes in Scheme of valuation:  
For Q. IV.

Old	NEW
D,E,F, G, H = 5 Marks	E,F, G, H Only = 4 Marks

For Q. V.

Old	NEW
Record = 5 Marks	Record = 5 Marks (No Change)
Herbarium (15 Sheets) 2 Marks	Herbarium (10 Sheets only) 3 Marks

Guidelines to lecturers for question No.3 - Experiments in Botany Practicals.

**Experiment - I: Osmosis by potato Osmoscope (Deleted)**

The whole experiment should be done by the student at the time of practical examination.

**Experiment - II: Study of plasmolysis in epidermal peel of leaf.  
(Deleted)**

The whole experiment should be done by the student at the time of practical examination. Lecturer should give *Rheo/Tradescantia* leaves or any other leaf and 20% sucrose/ sodium chloride (NaCl) solution to students.

**Experiment - III: Transpiration by cobalt chloride paper method  
(Deleted)**

Cobalt chloride paper has to be prepared by the lecturers in advance and the same to be given to the students for performing the actual experiment.

**Note: The students need not be prepare cobalt chloride paper.**

**Experiment- IV: Separation of leaf pigments or 'chloroplast pigments by paper chromatographic technique.**

The leaf extract is to be prepared by the student only at the time of examination to perform the experiment.

**Note:** Practical examiners are advised to begin the examination, with Question No. 3 experiments in order to give sufficient time to the students to get the result.

**GOVERNMENT OF TELANGANA**

**TELANGANA STATE BOARD OF INTERMEDIATE EDUCATION**

**SUBJECT : BOTANY (1ST AND 2ND YEAR ) PRACTICALS SYLLABUS  
(DELETED TOPICS) FOR THE ACADEMIC YEAR 2020 -21**

S.NO.	PRACTICAL SYLLABUS (100%)	DELETED TOPICS NAME FROM SYLLABUS (30% DELETED)	PRACTICAL SYLLABUS (70%)	MARKS ALLOTTED
I	A) PLANT TAXONOMY 1) FABACEAE FAMILY 2) SOLANACEAE FAMILY 3) LILIACEAE FAMILY	1) FABACEAE DELETED	A) PLANT TAXONOMY 2) SOLANACEAE FAMILY 3) LILACEAE FAMILY	6
II	B) ANATOMY 4) T.S OF DICOT STEM 5) T.S. OF MONOCOT STEM 6) T.S OF DICOT ROOT 7) T.S OF MONOCOT ROOT	NO CHANGE	B) ANATOMY 4) T.S OF DICOT STEM 5) T.S OF MONOCOT STEM 6) T.S OF DICOT ROOT 7) T.S OF MONOCOT ROOT	6
III	C) LIVE EXPERIMENTS 8) i) POTATO OSMOSCOPE ii) PLASMOLYSIS iii) TRANSPIRATION BY COCL2 paper Method iv) PAPER CHROMATOGRAPHY	DELETED I) POTATO OSMOSCOPE II) PLASMOLYSIS III) TRANSPIRATION BY COCL2 paper Method	IV) PAPER CHROMATOGRAPHY	6
IV	D) VEGETATIVE MORPHOLOGY Q NO 9 TO 22 (9,10,11,12,13,14,15,16,17,18,19,20,21,22)	DELETED (9,10,11,12,13,14,15,16,17,18,19,20,21,22)	TOTAL DELETED	0
	E) REPRODUCTIVE MORPHOLOGY QNO( 23 TO 30) (23,24,25,26,27,28,29,30)	DELETED 26,27,28,29,30 ONLY	E) REPRODUCTIVE MORPHOLOGY Q NO 23 TO 25 (23, 24,25 ONLY)	1
	F) ALGAE AND FUNGI Q NO (31 TO 34) 31,32,33,34.	NO CHANGE	F) ALGAE AND FUNGI Q NO (31 TO 34) 31,32,33,34	1
	G) BRYOPHYTA AND PTERIDOPHYTA Q NO 35 TO 38 (35,36,37,38)	NO CHANGE	G) BRYOPHYTA AND PTERIOPHYTA QNO 35 TO 38 (35,36,37,38)	1
	H) GYMNOSPERMS AND ANGIO SPERMS Q NO( 39 TO 42) 39,40,41,42	41,42 DELETED	H) GYMNOSPERMS Q NO 39, 40 ONLY	1
V	RECORD			5
VI	HERBARIUM (10 Sheets only)			3
	TOTAL			30