

Guidelines for Higher Secondary Practical Evaluation 2022-2023

BOTANY

(Total Periods 30)

1. **A. Dicot stem, Monocot stem, Dicot root, Monocot root**
Preparation-2, Diagram -1, Labelling- 1/2 (at least two main parts), Identification- 1/2, Reasons-2(two features for stem/root and other two for dicot/monocot).
2. **B. Microscopic slides** (Oscillatoria, Rhizopus, Spirogyra, Moss-protonema, Fern-prothallus) Macroscopic specimens (Agaricus, Sargassum, Funaria-gametophyte with sporophyte, Nephrolepis sporophyte, Pinus male cone and Female cone), Any three microscopic and macroscopic specimen should be provided. Name of specimen and its specified part - 1/2 any one reason for its identification- 1/2.
C. Photograph of Bioreactor, Bt cotton ,Cloning vector(identification-1/2, any one reason for its identification- 1/2).
3. **D. Identification** of any one stage of mitosis from the permanent slide mounting (use pointer eye piece) (Identification of given stage 1/2 any one reason for its identification-1/2).
4. **E. Physiological experiments** (Study of plant pigments by paper chromatography, Hydrilla experiment, Study of distribution stomata on lower and upper surfaces of leaves, Study of Yeast fermentation and production of alcohol). (At least two experiments should be provided) Aim of experiment- 1/2,, diagram-1/2, labelling- 1/2.
5. **F. Single flower** of family Solanaceae should be provided to describe any one of it's floral whorl (Separate whorl to different batches). - 1 1/2
6. **G. Lichen, Cuscuta/Loranthus, Epiphyte**(identification of interaction-1 description-1).
7. **H. Anther** should be provided to take C.S.Section- 1, diagram-2(diagramatic sketch of four lobed anther C.S/cellular diagram of a single lobe) (label any three parts).
8. Ask simple questions informally related to the physiological experiments done-1.
9. Practical diary-2.
 - * Issue individual materials for Q. no.1A and 7H
 - * Give separate answer sheet for answering spot at sight ,the material B,C and D (mitosis) and collect the answer sheet immediately after answering.

Model Question Paper**HIGHER SECONDARY PRACTICAL EXAMINATION
BOTANY**

HSE-II

Time: 1½Hrs

Total score: 20

1. Prepare a T.S of the given specimen A and identify giving reasons. Draw the ground plan and label the parts. Leave the preparation for valuation. Score 6
Preparation - 2
Labelled diagram - 1½
Identification - ½
Reason – 2
2. Identify the material B and C at sight by giving reasons. Score 2
Identification - ½ x 2 = 1
Reason - ½ x 2 = 1
3. Identify the given stage D of mitosis and give reasons. Score 1
Identification - ½
Reason - ½
4. Write the aim of the experiment E. Draw and label the parts. Score 1½
Aim -½
Labelled diagram – 1
5. Observe the given flower ,F. Describe it's floral whorl, calyx/corolla/ gynoecium (Any one) using technical terms. (Any three) Score 1½
Three technical terms- 1½
7. Write down the ecological interaction of the specimen G Score 2
Name of interaction- 1
Description -1
8. Prepare a C.S. of the given specimen H. Draw diagram and label any two parts. Leave the preparation for valuation. Score 3
Section - 1
Labelled diagram – 2
9. Ascertaining the awareness of concepts related to the experiment Score 1
10. Practical diary Score 2