

Model Practical Papers



مولانا آزاد نیشنل اردو یونیورسٹی

MAULANA AZAD NATIONAL URDU UNIVERSITY

(A Central University established by an Act of Parliament in 1998)

(Accredited with 'A' Grade by NAAC)

DEPARTMENT OF BOTANY

B. Sc. Semester I

Practical paper (Based on the theory paper of Semester –I)

Time 3 Hours

M. marks: 50

1.	Identify two Algae from the given Algal mixture (A) Draw labelled diagram and write comments (Slide: 1M; Diagram: 1M; Identification: 1M; Comments: 2M= 5×2=10)	10 M
2.	Prepare a temporary stained slide of a given material (B). Identify it, draw labelled diagram and write comments. (Bryophytes/Pteridophytes/Gymnosperm) (Slide: 4M; Diagram: 2M; Identification: 1M; Comments: 3M)	10 M
3.	Prepare Gram staining (C) of the given Bacterial Culture.	05 M
4.	Identify D, E, F, G, H and write comments (Identification: 1M; Comments:1M)	10 M
5.	Record + Viva (10+5)	15 M

NOTE: Internal Assessments includes Record + Viva of 15 Marks.

External Assessments includes Lab performance = 35 Marks

Key:

- A. Algae
- B. Bryophytes/Pteridophytes/Gymnosperm
- C. Bacterial Culture
- D. Permanent slides of fungi
- E. Whole specimen/permanent slide of Bryophytes
- F. Whole specimen/permanent slide of Pteridophytes
- G. Permanent slide/specimen of Gymnosperms
- H. Permanent slide/specimen of Gymnosperms



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B. Sc. Semester II

Practical paper (Based on the theory paper of Semester –II)

Time 3 Hours

M. marks: 50

1.	Prepare a temporary stained slide of given (A & B) material. Identify it, Draw a neat labelled diagram and write its comments. (Slide preparation: 5M; Identification: 1M; Diagram: 2M; Comments: 2M = $10 \times 2 = 20$)	20 M
2.	Prepare a temporary slide of pollen from the given flower (C) (Slide preparation: 1M; Diagram: 1M; Identification: 1M; Comments: 2M)	05 M
3.	Identify D, E, F, G, H and write comments ($5 \times 2 = 10$)	10 M
4.	Record + Viva ($10 + 5 = 15$)	15 M

Key:

- A. Monocot/Dicot root
- B. Monocot stem/Dicot stem/Leaf
- C. Hibiscus/Acacia/Grass
- D. Tissue parenchyma/Collenchyma/-----/Tracheids/Vessels
- E. Stomata – Anomocytic/ Paracytic/Anisocytic/Diacytic
- F. Ovule – Orthotropous/Anatropous/Hemi anatropous/Campylotropous
- G. Permanent slide of Embryo
- H. Permanent slide of Pollen tube.



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B. Sc. Semester III

Practical paper (Based on the theory paper of Semester –III)

Time 3 Hours

M. marks: 50

1.	Describe the plant specimen (A) its technical tissues. Draw neat labelled diagram of twig, L.S of flower, T.S of Ovary, Floral diagram and write Floral formula. (Description: 6M; Twig diagram: 1M; L.S of flower: 1M; T.S of ovary: 1M; Floral diagram: 4M; Floral formula: 2M)	15 M
2.	Find out the pH value of the given soil samples (B & C) (Comments: 1.5M; Value: 1M = 2.5 × 2 = 5)	05 M
3.	Identify D, E, F, G, H and write comments (5 × 2 = 10)	10 M
4.	Herbarium Sheets	5 M
5.	Record and Viva (10 + 5 = 15)	15 M

Key:

- A.** Plant material with flower
- B. & C.** Soil from two different areas
- D. & E.** Rain gauge, Hygrometer, Lux meter, Thermometer, Anemometer
- F.** Species of parasitic plants (Cuscuta/ Orobanche/Nepenthes)
- G.** Species 8 Hydrophytes/Xerophytes
- H.** Live plant/Herbarium Sheet



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B. Sc. Semester IV

Practical paper (Based on the theory paper of Semester –IV)

Time 3 Hours

M. marks: 50

Major Experiment:		
1.	Conduct the experiment (A), write aim, material required, procedure, diagram (if required), results and conclusion	20 M
Minor Experiment:		
2.	Demonstration (B) write the aim, material required, procedure and give conclusion	10 M
3.	Calculate stomatal index of a given leaf (C)	05 M
4.	Record and Viva (10 + 5 = 15)	15 M

Key:

- A. Experiment No. 5, 7, & 8
- B. Experiment No. 1, 2, 3, 4, 6, & 9
- C. Leaf of any plant



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B. Sc. Semester V

Practical paper (Based on the theory paper of Semester –V)

Time 3 Hours

M. marks: 50

1.	Make an Aceto---- squash preparation of material (A), Identify and two stages of Cell Division, Draw neat labelled diagram and Write Comments	20 M
2.	Solve any two Genetic Problems (B & C) (Monohybrid Cross/Dihybrid Cross; Test Cross and Identification of Se---)	10 M
3.	Identify (D) and Write Comments	05 M
4.	Record and Viva (10 + 5 = 15)	15 M

Key:

A. Onion root/flower

B. & C. Monohybrid, Dihybrid, Test Cross, ----

D. Translocation Ring/Laggards/Inversion Bridge Photographs



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B. Sc. Semester VI

Practical paper (Based on the theory paper of Semester –VI)

Time 3 Hours

M. marks: 50

Major Experiment		
1.	Prepare a temporary slide of a given infected leaf Identify, Draw labelled diagram, and write comments (A) (Slide preparation: 8M; Diagram: 3M; Comments: 3M; Identification: 1M)	15 M
Minor Experiment		
2.	Write the Procedure of Isolation of Bacteria/Fungi from the soil (B)	10 M
3.	Count the Fungal Spore by Haemocytometre (C)	05 M
4.	Identify D & E and Write Comments ($2.5 \times 2 = 5$) (Identification: 1M; Comments: 1.5M)	05 M
5.	Record and Viva ($10 + 5 = 15$)	15 M

Key:

- A.** Leaf of Wheat Rust, White Rust, Late blight of Potato
- B.** Bacteria/Fungi from soil
- C.** Fungal Spore
- D.** Specimen/Slide Alternaria/Albugo (White rust)
- E.** Specimen/Slide (Puccinia)