

BOARD OF INTERMEDIATE EDUCATION, KARACHI

INTERMEDIATE EXAMINATION **MODEL PAPER 2026**

BIOLOGY PAPER – I **BOTANY (THEORY)** **(Science Pre-Medical Group)**

Max. Marks: 36

Time: 1 hour 45 minutes

INSTRUCTIONS: i) SECTION 'B' and SECTION 'C' must be solved on provided **E-Sheet** (Examination Copy).
ii) Student are instructed to write their answers on page allocated for the respective question number.

According to New Book

SECTION 'B' **(SHORT-ANSWER QUESTIONS)**

Marks: 18

2. Answer **All** part questions. All part questions carry equal marks.

- i) Write short note on Mitochondria **OR** Plastids.
- ii) Describe the role and deficiency symptoms of Nitrogen or Potassium in plant.
- iii) Why desert plants reduce their leaf size?
- iv) Define Phosphorylation and its types.
- v) How virus survive inside the host cell?

OR

- vi) Why Lysosomes are called Suicidal Sacs?
- What are the fundamental adaptations of vascular plants for land habitat?

OR

- vii) How Pyruvate is converted into Acetyl-CoA?
- Differentiate between aerobic and anaerobic bacteria.

OR

- Give botanical name of the following (any two)
* Mako * Barley * Amaltas * Mulhethi
- viii) Why Protoctista is not considered as monophyletic group?

OR

- ix) What do you mean by positive and negative sense RNA virus?
- Write any four control of harmful bacteria.

OR

How plants cope with low temperature?

SECTION 'C' **(DETAILED-ANSWER QUESTIONS)**

Marks: 18

Note: Answer any **Two** questions from this section. All questions carry equal marks.

3. Explain structure and functions of Plasma membrane with labelled diagram.

OR

Define Bacteria. Describe structure of Bacteria with labelled diagram.

4. Describe light independent reaction (C_3 -Cycle) of photosynthesis in detail with diagram.

OR

What are Phytohormone? Write name and describe their role in detail.

5. Describe life cycle of Fern with the help of labelled diagram.

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INTERMEDIATE EXAMINATION MODEL PAPER 2026

BIOLOGY PAPER – I

BOTANY (THEORY)

(Science Pre-Medical Group)

Max. Marks: 09

Time: 15 minutes

According to New Book

SECTION 'A'

(MULTIPLE CHOICE QUESTIONS) – (M.C.Qs.)

(Marks : 09)

NOTE:

- This section consists of 18 part questions and all are to be answered. Each part question carries 0.5 mark.
- This Section 'A' of Multiple Choice Question (MCQs) must be solved on the **MCQs/OMR sheet** enclosed on the last page of provided **E-Sheet & OMR** (Examination Copy).
- The correct answer bubble must be filled on MCQs / OMR sheet 1) ☐ A ☐ B ☐ C ☐ D
- Use only blue / black ball point on MCQs / OMR sheet.
- Avoid pencil / White-o pen / correction pen / ink remover and gel pen to solve the question on MCQs / OMR sheet.
- All notations are used in their usual meanings. The use of Scientific Calculator is allowed.

1. Choose the correct answer for each from the given options:

- Organelles other than the nucleus that contain DNA:
I) Ribosomes II) Chloroplast III) Mitochondria
A) I only B) II only C) II and III D) I and II
- Number of Carbon dioxide molecules are formed during citric acid cycle:
A) 2 B) 4 C) 6 D) 8
- The Oxygen released during photosynthesis, comes from:
A) Water B) Carbon dioxide C) Chlorophyll D) Carotenoids
- Bacteriophage escape from host cell by the activity of:
A) Lysozyme B) Ribozyme C) Peroxidase D) Reductase
- When habitat become harsh and nutrients exhausted, its development in bacteria initiated:
A) Capsule B) Cell wall C) Endospore D) Mesosome
- Ameoboid stage of slime mold is:
A) Plasmodium B) Fruiting bodies C) Euglena D) Sporangia
- Sub-division of Tracheophyta does not contain true roots and leaves:
A) Lycopsida B) Psilopsida C) Pteropsida D) Sphenopsida
- Process involved in the promotion of flowering by cold treatment:
A) Photoperiodism B) Vernalization
C) Secondary growth D) Transpiration
- Guttation occurs through:
A) Lenticels B) Hydathodes C) Stomata D) Bark
- Clarity of image is generally known as:
A) Magnification B) Contrast C) Resolution D) Sedimentation
- Organelles involved in Photorespiration:
A) 2 B) 3 C) 4 D) 5
- Structure smaller than virus having single stranded RNA with some double stranded regions called:
A) Viroids B) Prions
C) Minus strand virus D) Double stranded DNA virus
- Anaerobic bacteria produce chemicals during respiration except:
A) Ethanol B) CO₂ C) Water D) Lactic acid
- Structure of obligate parasite, specialized for fixation and absorption:
A) Flagella B) Pili C) Haustoria D) Root hairs
- In banana tree, flowers are covered by one or many large bracts called:
A) Spathes B) Spadix C) Capitulum D) Palea
- The hydrostatic pressure in excess of atmospheric pressure is known as:
A) Water potential B) Pressure potential
C) Osmotic potential D) Solute potential
- Induction of flowering in response to the relative length of day and night is known as:
A) Photoperiodism B) Photophosphorylation
C) Photorespiration D) Phototropism
- Double fertilization is the characteristic feature of:
A) Gymnosperm B) Bryophyta C) Lycopsida D) Angiosperm

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