

Model Answer

Final Exam: May 06, 2026, 3:00 PM to 4:30 PM

Exercise 1

(Scientific Terminology)

08 pts

Text: Phototropism

Phototropism is an essential physiological response in plants that describes their directional growth in response to light. Phototropism refers to the movement or growth of plant organs, especially shoots, toward or away from a light source. This phenomenon is regulated by plant hormones called auxins, which accumulate on the shaded side of the plant, causing differential cell elongation. As a result, the plant bends toward the light, optimizing photosynthesis efficiency.

The mechanism of phototropism involves signal perception in the plant's apical region, followed by a cascade of cellular responses that modify growth patterns. In experimental biology, researchers often study phototropism *in vitro* using controlled light environments. Some studies, per se, demonstrate that even isolated plant tissues can respond to light stimuli under laboratory conditions. Modern plant biology increasingly integrates techniques such as LED-based growth systems and PCR analysis to study gene regulation involved in light response pathways.

1. Extract from the text three terms formed by affixation, blending (portmanteau), or compounding. Justify your answers.

Extract three terms formed by:

- a) Affixation: Increasingly → Formed from the prefix “in-” (into) + root “crease” grow/rise) + suffixes “-ing” and “-ly” 1.00 + (0.25 x 3)
- b) Blending: Phototropism → Combination of “Photo” + “Tropism” into a single word. 1.00 + (0.25 x 2)
- a) Compounding: PCR analysis → 1.00 + (0.25 x 3)

→ Combination of two words (PCR + analysis) forming a compound noun.

2. Extract from the text an abbreviation and identify its type.

Extract an abbreviation and identify its type:

PCR → This is an initialism 1.00 + (0.50 x 2)

It is formed from the first letters of Polymerase Chain Reaction and pronounced letter by letter.

3. Identify an error in the text related to modern abbreviation rules.

per se: should be written in italics because it is a Latin expression. 0.5 x 2

Exercise 2 (Study and Text Comprehension)

06 pts

For each question, choose the correct answer.

QCM 1: Skimming is used to:

- a) Find specific details
- b) Identify main ideas quickly (02.00 pts)**
- c) Analyze deeply

QCM 2: The outline method organizes notes:

- a) Randomly
- b) Alphabetically
- c) Hierarchically (02.00 pts)**

QCM 3: Note-taking helps students to:

- a) Organize and understand ideas (02.00 pts)**
- b) Showing relationships between ideas
- c) Copy texts

Exercise 3 (Written and Oral Expression Techniques)

06 pts

Mark **True (T)** or **False (F)**.

1. In scientific writing, using complex jargon always improves clarity and precision.
 T F (01.00 pt)
2. Conciseness requires removing all examples and explanations from scientific texts.
 T F (01.00 pt)
3. Effective oral communication requires both verbal and non-verbal elements.
 T F (01.00 pt)
4. A summary of a long research article can exceed 50% of its original length.
 T F (01.00 pt)

5. A well-written discussion should compare results with existing literature.
 T F (01.00 pt)
6. Scientific communication skills develop instantly after learning theory. T F
(01.00 pt)