

553/2
BIOLOGY
Paper 2
20242 ½
HOURS

YAAKA EXAMINATIONS

BIOLOGY

Paper 2

INSTRUCTIONS TO CANDIDATES

*This paper consists of **two** examination items. Answer **all** the items in the spaces provided.*

*Drawings should be made in the spaces provided. Use **sharp pencils** for your drawings. Coloured pencils or crayons should **not** be used.*

*No additional sheets of writing paper are to be inserted in the booklet. Work on additional sheets will **not** be scored.*

ITEM	SCORE(S)	EXAMINER'S SIGNATURE
Item 1		
Item 2		
Total		

INSTRUCTIONS FOR PREPARING SPECIMENS AND APPARATUS

The teacher responsible for preparing specimens must ensure that candidates are provided with correct specimens and other materials as specified in these instructions. Specimens and solutions which have been assigned codes should be presented to candidates using those **codes only** and not any other identity. The head teacher **must** ensure that the teacher responsible for preparing the specimens hands in his/her trial results for the physiology/biochemistry question, properly sealed in a separate envelope and **firmly** fastened (attached) to the candidates' script envelope(s).

In addition to the apparatus ordinarily contained in a Biology Laboratory, each candidate will require;

Specimen C: Fresh leaf cross-section (for plant tissues).

Specimen D: Fresh muscle tissue from chicken (for animal tissues).

Materials Needed:

Microscope slides, coverslips, and mounting needles.

Methylene blue and iodine solution for staining tissues.

Special Notes:

Ensure slides are properly prepared and tissues are clearly visible under the microscope.

Item 1

A gardener notices that different parts of plants and animals have specialized tissues, each performing unique functions. She is curious about how these tissues are structured and how they contribute to the organism's survival. As a biology student, prepare slides of specimens C and D. Observe under the microscope and identify the types of tissues so that you will go and explain to her.

Task:

(a). Draw and label the tissues observed.

(b). Explain the functions of the tissues and their roles in the organism.

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Item 2

Study carefully the organization of Plant and animal tissues using the specimens provided to answer the questions that follow.

Task:

(a). Describe the key differences between the tissues of plants and animals.

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(b). Discuss how the structure of each tissue relates to its function.

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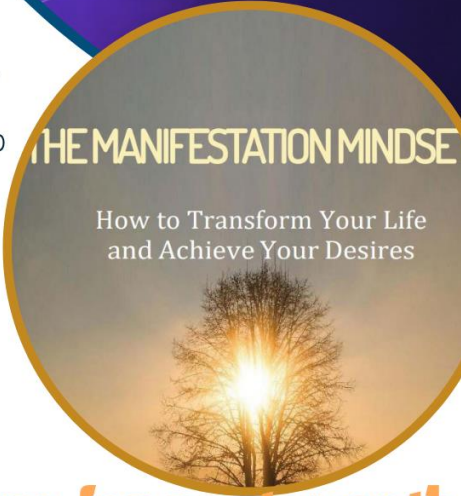
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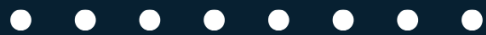
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