

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 A:** Fresh onion bulb (for observing plant cells).
- **Specimen B:** Fresh liver tissue (for observing animal cells).
- **Prepared Slide:** Human cheek cells.
- Materials Needed:**
  - Light microscopes.
  - Iodine solution for staining onion cells.
  - Methylene blue for staining cheek cells.
  - Dropper, forceps, and dissecting needles.
- **Special Notes:**  
Ensure proper preparation and labeling of slides.





## Item 2

Using the prepared slide of human cheek cells, identify the main organelles and answer the questions that follow.

Task:

(a). Draw and label the observed cell components.

(b). Explain the function of each labeled organelle and their importance to the cell.

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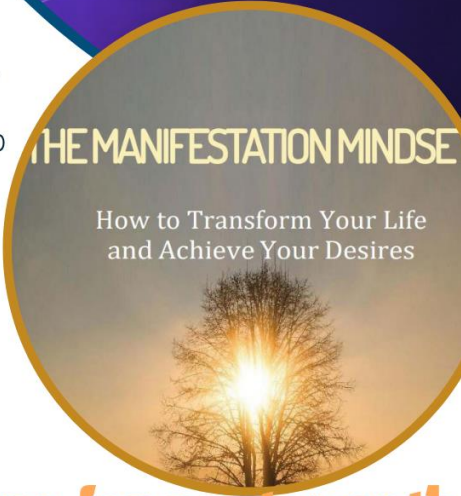
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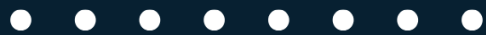
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