

THE UNITED REPUBLIC OF TANZANIA
NATIONAL EXAMINATIONS COUNCIL
CERTIFICATE OF SECONDARY EDUCATION EXAMINATION

033/2B
BIOLOGY 2B
ALTERNATIVE B PRACTICAL
(For Both School and Private Candidates)

TIME: 2 Hours 30 Minutes

2006/10/23 a.m.

Instructions

1. This paper consists of three (3) questions.
2. Answer two (2) questions including question one (1).
3. Each question carries 25 marks.
4. Except for diagrams which must be drawn in pencil, all writings should be in blue/black ink or ball point pen.
5. Electronic calculators are **not** allowed in the examination room.
6. Cellular phones are **not** allowed in the examination room.
7. Write your **Examination Number** on every page of your answer booklet(s).

1. You have been provided with paste P₁. The paste was obtained by grinding solid food sample in a mortar and little amount of water was added to it.

(a) Design and carry out experiments to identify the carbohydrates present in P₁.

Record your experimental work as shown in table I below.

Test for	Procedure	Observations	Inferences

- (b) (i) Name **four (4)** natural sources of the food substances identified in (a) above.
- (ii) Name the enzymes and the parts of the digestive system in man which are responsible for digestion of each food substance identified in (a) above before they get into the blood.

2. Observe specimen H carefully.

- (a) Design and carry out an experiment to show that chlorophyll is necessary for photosynthesis.
- (b) Write down the importance of photosynthesis.
- (c) Draw specimen H before and after the experiment.

3. You have been provided with specimens D, E, F and G. Observe the specimens carefully using hand lenses where necessary.

- (a) (i) Give a common name for each of the specimens D, E, F and G.
- (ii) Mention the habitats of specimens E, F and G.
- (iii) How is specimen G adapted to its environment?
- (b) (i) To which kingdom does each of specimens D, E, F and G belong?
- (ii) Using observable features explain how specimen D differs from other specimens.
- (iii) Draw a diagram to show the feeding relationship between D, E, F and G. Giving reasons name this type of feeding relationship.
- (c) Using examples give the economic importance of specimen F.
- (d) Draw a well-labelled diagram to show the external features of specimen G.