

THE UNITED REPUBLIC OF TANZANIA
NATIONAL EXAMINATIONS COUNCIL
CERTIFICATE OF SECONDARY EDUCATION EXAMINATION, 1990

033/2

BIOLOGY PAPER 2

TIME: 2 Hours.

INSTRUCTIONS TO CANDIDATES

1. Answer ALL questions in this paper.
2. ALL answers MUST be written in the answer booklet provided.
3. Write your centre and index number on every page of your answer booklet.
4. Except for diagrams which must be drawn in pencil, ALL writing should be in ink or ball point pens.
5. FAILURE TO FOLLOW INSTRUCTIONS WILL LEAD TO LOSS OF MARKS.

This paper consists of 2 printed pages.

1. You have been provided with specimen A. Design and carry out an experiment to identify the food substance(s) present in it. Record your procedure, observations and inferences as shown in the table below.

| Test for | Procedure | Observation | Inferences |
|----------|-----------|-------------|------------|
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2. Study specimens M and N carefully
- (a)
 - (i) Identify specimens M and N by giving their common names.
 - (ii) What parts of the plant do specimens M and N represent?
Give reasons.
 - (iii) Draw and label specimen M.
 - (b)
 - (i) State one function common to both of the specimens M and N in nature other than of storage of food.
 - (ii) Suggest one food substance stored in specimen M.
 - (c) Perform a food test to verify your answer in (b)(ii) above . Record your procedure, observations and inferences as shown in the table above (Q.1).
3. Study specimens O, P, Q, R, S and T carefully.
- (a) What name is given to the group of plant parts to which specimens O, P, Q and R belong? Give reasons for your answer.
 - (b) Giving reasons show which of specimens O, P, Q and R is a
 - (i) caryopsis
 - (ii) drupe
 - (iii) berry
 - (iv) pod
 - (c)
 - (i) Identify specimens S and T
 - (ii) What is the name of the process by which specimen S changes to specimen T?
 - (iii) From which class of animals were specimens S & T taken ?
4.
 - (a) Which distinguishing characteristics observable in specimens H and I are used to place them in their respective phyla?
 - (b) Name the phyla and classes to which specimens H and I belong.
 - (c) Draw and label specimens H and I.