THE UNITED REPUBLIC OF TANZANIA

NATIONAL EXAMINATIONS COUNCIL

CERTIFICATE OF SECONDARY EDUCATION EXAMINATION, 1988

033/2

BIOLOGY - PAPER 2

(For School and Private Candidates)

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 pen.
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 carbohydrates present in it.

   (a) Outline the procedure you will follow to prepare specimen A for the investigation.

   (b) In testing for the carbohydrates record your procedure, observations and inferences as shown in the table below.

Test for:	Procedure	Observations	Inferences

2. (a) (i) What part of the plant does specimen A represent? Give reasons for your answer.

   (ii) What functions does specimen A perform in the plant? Give reasons for your answer.

   (b) Study specimen B carefully.

   (i) Remove the structures concerned with gaseous exchange. Draw and label the parts of the structures.

   (ii) What problems will specimen B face in life if all the fins were removed?

3. (a) (i) Draw and label specimens C and D.

   (ii) What part of the plant do specimens C and D represent? Give reasons for your answer.

   (b) Remove the outer covering of each of specimens C and D and then place the contents on the bench.

   Which part of the plant do the contents of each of specimens C and D represent? Give reasons for your answer.

   (c) Using the contents of specimens C and D obtained in (b) above, outline the procedure you would follow to identify the classes for the plants from which specimens C and D were obtained.