KM

THE UNITED REPUBLIC OF TANZANIA
NATIONAL EXAMINATIONS COUNCIL
DIPLOMA IN SECONDARY EDUCATION EXAMINATION

733/2A

BIOLOGY 2A
(ACTUAL PRACTICAL A)

Time: 3 Hours **Tuesday, 13th May 2014 a.m.**

Instructions

1. This paper consists of **three (3)** questions.
2. Answer **all** questions.
3. Question number 1 carries 40 marks and the rest carry 30 marks each.
4. Cellular phones are **not** allowed in the examination room.
5. Write your **Examination Number** on every page of your answer booklet(s).

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1. Dissect specimen S_1 in the usual way to display the digestive system.

   (a) Draw and label the structures only related to the system.
   (b) State the enzymes secreted by each structure labelled in (a) above.
   (c) Suggest the substrate digested by each enzyme in (b) above and state its products of digestion.
   (d) State five economic importance of specimen S_1.
   (e) Classify specimen S_1 to the class level.
   (f) Name four features shared by both specimen S_1 and man.
   (g) **Leave your dissection properly displayed for assessment.**

2. (a) You are provided with solution A_1. Using the reagents provided carry out an experiment to identify food substance (s) contained in solution A_1. Present your report in a tabular form as follows:

FOOD TESTED	PROCEDURE	OBSERVATION	INFERENCE

   (b) (i) For each of the food substance identified in (a), suggest one storage organ from which solution A_1 might have been extracted.
   (ii) What role is played by each food substance identified in solution A_1 in human being.
   (iii) State where and in which form each food substance is stored in the body.
   (iv) Where does the digestion of each food substance take place.
   (v) Name the enzyme(s) that act on each food substance.
   (vi) One of the food substance identified is important to desert animals. Name the food substance and state why it is said to be important to such group of animals.

3. (a) You have been provided with a flower (F_1):
   (i) Draw the floral diagram of F_1.
   (ii) Write the floral formular of F_1.
   (iii) Classify specimen F_1 to class level.
   (iv) Write the characteristics of the phylum to which specimen F_1 belong.

   (b) Study specimen **M** provided.
   (i) Provide the phylum and class for specimen **M**.
   (ii) Name the method of feeding used by specimen **M**.
   (iii) Describe the mouth parts that allow the above method of feeding possible.
   (iv) Cut one of the hind limb of specimen **M** with the innermost side facing upwards. Draw a large, well labeled diagram of the limb.
   (v) State how the hind limb of the specimen is adapted to carry out its functions.

   (c) Outline the life cycle of specimen F_2.

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