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

033/2A

BIOLOGY 2A
(ACTUAL PRACTICAL A)
(For Both School and Private Candidates)

Time: 2:30 Hours **Friday, 12th October 2012 a.m.**

Instructions

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

1. You have been provided with specimens **F** and **G**.

(a) Study specimens **F** and **G** carefully, then:
   (i) Identify specimens **F** and **G** using their common names.
   (ii) Compare specimens **F** and **G**, then state their observable differences.
   (iii) Briefly explain the types of germination which occurs in specimens **F** and **G**.

(b) Using a scalpel, remove the outer coat from specimen **F**. Split the two parts with the inner sides facing upwards. Then:
   (i) Draw a well labelled diagram to show the structures of one part of the split specimen **F** as would be seen from above.
   (ii) For each structure labelled in specimen **F**, state the role they play in seed germination.

(c) Using a scalpel, prepare a longitudinal section of specimen **G**.
   (i) Draw a well labelled diagram of the cut surface of specimen **G**.
   (ii) Identify the part used by specimen **G** to absorb water during seed germination.

2. You have been provided with specimens **H**, **I**, **J** and **K**.

(a) Study carefully specimens **H** and **I** then:
   (i) Identify specimens **H** and **I** by their common names.
   (ii) Suggest the mode of locomotion of specimens **H** and **I**. Give reason to support your answer.
   (iii) State the features used to place specimen **H** in the Kingdom Animalia.

(b) Use the hand lens to observe specimens **J** and **K** then:
   (i) Identify specimens **J** and **K** by their common names.
   (ii) Name the habitats for each of specimens **J** and **K**.
   (iii) Briefly explain the features which enable specimen **H** to survive in its habitat.
   (iv) Classify specimens **J** and **K** to the phylum level.
   (v) Write down one advantage and one disadvantage for each specimen **J** and **K**.