THE UNITED REPUBLIC OF TANZANIA

NATIONAL EXAMINATION COUNCIL

DIPLOMA IN SECONDARY EDUCATION EXAMINATION

733/2B **BIOLOGY 2B**

Time: 3 Hour. **Year: 2020**

Instructions

1. This paper has three papers.
2. Answer **all** questions.
3. Question **1** contains 30 marks while question 2 and 3 have 10 marks each.
4. Mobile phones are not allowed inside the examination room.
5. Write your Examination Number on every page of your answer booklet.

1. Dissect the provided specimen labelled **Q** to display the digestive system.

(a) Draw a well-labelled diagram of the dissected specimen showing six parts of the digestive system.

(b) Identify the organ responsible for:

(i) Producing bile

(ii) Absorbing digested nutrients

(iii) Connecting the mouth and stomach

(c) Does specimen Q have a gall bladder? Explain your answer.

2. You are given specimen **S**, suspected to contain catalase enzyme. Carry out the following:

(a) Crush half of specimen S and place it into test tube A.

(b) Put the other half uncrushed into test tube B.

(c) Add 2 ml of hydrogen peroxide into both tubes.

(d) Observe and test the gas released using a glowing splint.

Questions:

(i) What is the aim of this experiment?

(ii) Which test tube is the control?

(iii) What did you observe in each test tube? Explain the reason for the observation.

(iv) Name the enzyme involved and write the chemical equation for the reaction.

(v) What gas was released? Give two deductions.

3. Observe specimens **T**, **U** and **V**.

(a) List four observable features shared by specimens T and U.

(b) Differentiate between specimen V and U using three features.

(c) Draw specimen T and label five parts.

(d) Mention two economic importance of specimen U.