



THE UNITED REPUBLIC OF TANZANIA
MINISTRY OF DEFENCE AND NATIONAL SERVICE
MILITARY SCHOOLS ASSOCIATION



FORM FOUR PRE NATIONAL EXAMINATION

033/2A

BIOLOGY 2A

(ACTUAL PRACTICAL)

TIME: 2:30 Hours

10th AUGUST 2026

INSTRUCTIONS

- 1 . This paper consists of two (2) questions . Answer both 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 , cellular phones and any unauthorized materials are not allowed in the examination room .
- 5 . Time : 2 ½ Hours .

1 . You have been provided with food sample A and solution B in a beaker , two test tubes labelled 1 and 2 measuring cylinder , scalpel / knife , white tile , test tube rack and table reagents . Carry out experiments using procedures outlined below then answer the questions that follow :-

Procedure

- (i) Peel off food sample A by using a scalpel / knife .
- (ii) Slice off a small piece of a peeled sample A and spread it on a white tile .
- (iii) Add two drops of iodine solution to a sliced piece of sample A on a white tile and record your observation .

- (iv) Take test tube 1 and 2 and put in 2 mls of solution B in each .
- (v) In test tube 1 , add 2 mls of sodium hydroxide solution followed by drops of 1 % copper sulphate solution while shaking . Record your observation .
- (vi) In test tube 2 , and 3 (three) drops of Sudan III solution , shake well the mixture and allow it to settle then observe the results .

2 . You have been provided with specimens P , Q , R , S , T and U .

- (a) (i) Identify each specimen by its common name .
 - (ii) Classify specimens P , S , T and U to phylum / Division level .
- (b) Why it is important too the scientists to classify specimens P , Q , R , S , T and U to their lowest taxonomic groups ? Give three reasons .
- (c) Give three reasons as to why specimen P cannot be placed in the same class with specimen R .
- (d) (i) What is the role of specimen Q to the organism in which it is found ?
 - (ii) Suggest the best pollinator for specimen Q , giving three (3) reasons for your suggestion .
 - (iii) Why is pollination important in specimen Q ? Give three points .
- (e) Explain , giving four (4) points as to why specimen U is important to Tanzanian citizens .