



TANZANIA HEADS OF ISLAMIC SCHOOLS COUNCIL
FORM SIX INTER ISLAMIC MOCK EXAMINATION

BIOLOGY 2

(For Both School and Private Candidates)

133/2

TIME: 3 HOURS

Friday, 6th March 2026 a.m.

Instructions

1. This paper consists of **six (6)** questions.
2. Answer a total of **five (5)** questions.
3. Each question carries **twenty (20)** marks.
4. All writing must be in a blue or black ink, except for drawing which must be in pencil.
5. Communication devices and any unauthorized materials are **not** allowed in the examination room.
6. Write your **Examination Number** on every page of your answer booklet(s).

1.
 - (a) Apart from removing waste products generated by cells throughout the body, the urinary system is also involved in homeostatic control of different body conditions. In five (5) points support the statement above.
 - (b) By using three (3) points in each, show how renal corpuscle and distal convoluted tubules are adapted to their roles.

2.
 - (a) Using examples, explain the meaning, causes and biological and environmental consequences of human population explosion.
 - (b) In four (4) points support the statement that the living component of ecosystem interact in different ways to achieve their everyday life needs.

3. With the aid of diagram describe the life cycle of plasmodium by considering the following three main stages.
 - (i) Pre erythrocytic stage
 - (ii) Erythrocytic stage
 - (iii) Sporogenic stage

4.
 - (a) During protein synthesis, a student notices that different sequences of three nitrogenous bases specify different amino acids. Using this observation, explain four (4) features of these specific sequences.
 - (b) A cross between pure red flowers of sweet pea and pure white flowers of sweet pea produced red flowers off springs in F_1 . On selfing the F_1 plants, F_2 had the phenotypes as shown below:

Red flower	418
Purple flower	106
White flower	36

 Carry out genetic crosses to show the phenotypes and genotypes of F_1 and F_2 .

5.
 - (a) A blacksmith develops very strong arms due to daily heavy work, but his children are born with normal arm muscles. Using this example, explain why Lamarck's theory is rejected by modern biologists. (Give four (4) reasons)
 - (b) Explain any four factors (mechanisms) that would cause a natural arising of new species from the main population.

6. (a) You have been assigned to prepare a display board demonstrating how plant cells increase in number. With the aid of diagrams respond by showing clearly the events involved from their preparation to separation stages.
- (b) What are the significance of the process you have demonstrated above? (Give four (4) points).

Wabillah Tawfiiq