



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

BIOLOGY 2

(For both School and Private candidates)

Time: 3 Hours

Thursday 7th March, 2024 p.m.

Instructions

1. This paper consists of six (6) questions.
2. Answer five (5) questions.
3. Each question carries twenty (20) marks.
4. All writing must be in a blue or black ink except for drawings which must be in pencil.
5. Cellular phones 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) The story of plants evolution is mainly of gradually improving adaptation to life on land
 - (i) Assess in two (2) points, how are ferns better adapted to life on land than liverworts or mosses.
 - (ii) Asses in three (3) points in what main respects are mosses, liverworts and ferns poorly adapted to life on land.
- (b) The ancient botanists considered oomycetes as primitive plants thus grouped them into kingdom plantae due to their cell wall made up by cellulose. As a recent botanist how would you criticize them? (Give six (6) points)
2. (a) While dissecting mice for practical studies of kidney as a urine formation machine, the form six students wonder the position of left and right kidney and notice the potential of Distal convoluted tubule in osmoregulation and blood pH control.
 - (i) Comment on the position of kidneys.
 - (ii) Assess in four (4) points, the structural values of distal convoluted tubule to its function.
- (b) As a form six student, how would you help form five students to describe the mechanism of urea formation in the liver?
3. “Meristem is said to be the growth regulatory machine of the plant body.” How would you justify this statement by summarizing the types of meristem, their location, roles and effects in plant growth?
4. (a) Being a father of Genetic, the Australian monk Gregory Mendel decided to use Pisum sativum in his experiment despite the presence of other beautiful flowers and good crops.
 - (i) How would you state the meaning of Genetics?
 - (ii) As a recent father of Genetics, what do you suggest for the Gregory Mendel’s decision? Give five (5) points.
- (b) Give four (4) points to support the debate that “the factors for heredity are located in the thread like structures within the nucleus.”
5. Paleontology is among of the evidence that can be used to support organic evolution. Analyze any four (4) facts that can be derived from paleontology and briefly describe five (5) types of fossils in paleontology.

6. (a) (i) In considering the primary productivity of an ecosystem, which groups of organisms other than plants make a contribution? Give three (3) groups.
- (ii) What factors are likely to affect the number and diversity of species reaching an area?
- (b) Assume you have been invited by Kigoma Regional Commissioner as Environmental Health Officer to show his people about the effects of deforestation on carbondioxide and destruction of ecosystem. Give two (2) points on each.

Wabillah Taufiq