ARUSHA REGION FORM TWO MOCK -2026

MARKING SCHEME

BIOLOGY.

1.

i	ii	iii	iv	v.	vi	vii	viii	ix	x.
B	B	B	B	B	B	B	B	C	B

2.

i	ii	iii	iv	v.
D	A	G	H	E

SECTION 'B' (70 marks)

10 marks each question.

3a) (i) Nutrition is the process by which living organisms obtain and utilize food substances for growth, energy, repair and maintanance of body functions.

(ii) Balanced diet is a diet that contains all the essential nutrients in the correct proportions needed for proper growth, health and energy.

3a) (iii) Nutrient is a chemical substance in food that provides nourishment essential for the maintenance of life, health and for growth, ~~such as~~ such as proteins, carbohydrates, fats, vitamins and minerals.

b (i) Lower energy needs:
- since the student spends most of the day sitting, the body requires fewer calories.

(ii) Focus on micronutrients:
- Vitamins and minerals (eg. Vitamin A, calcium, iron) are essential for growth, Immunity and maintaining health.

(iii) Moderate carbohydrates

(iv) Adequate protein:
- Needed for growth and repair, but in moderate amounts compare to athletes.

(v) High fibre intake: whole grains, fruits and ~~VE~~ vegetables help to prevent constipation, which is common in less active individuals

3b. (vi) Limit fat and sugars: To reduce risk of obesity and lifestyle diseases.

4(a) The possible reasons that scientific research is never ending process are;

(i) new questions arise from every discovery

(ii) Technological advancement

(iii) Peer-review and replication.

(b) (a — observation or problem recognizing

(b) — question or gathering information to formulate hypothesis.

(c) - experiment or data collection

(d) Analysis or Interpretation.

(e) Conclusion (1½ mar @)

5(a)(i) Guttation is the process where by Plants lose water droplets from leaf or tips margins through hydathodes.

(ii) Mass flow; Is the movement of water and mineral in bulk from high pressure to low pressure.

OR

Is the bulk movement of substances from one region to another region due to differences in pressure between the two regions. (1mark @)

(b) Factors affecting Transpiration.

(i) Temprature - High temprature causes the stomata to open hence increasing the rate of water loss ~~for~~ to the atmosphere.

(ii) Wind; This removes water vapour in the atmosphere and increasing transpiration.

(iii) Humidity; High humidity reduces transpiration rate.

(iv) Light; Light opens stomata, during the day and led to increasing the rate of transpiration. (2mark @)

b. (a) (i) Aerobic respiration — Is the steps by steps which involve the breaking down of glucose in presence of oxygen to release energy. (2mark@)

~~(2marks @)~~

(ii) Anaerobic respiration — Is the steps by steps which involve the breakdown of glucose without oxygen releasing less energy. (2mark@)

(b) (i) Oxygen transport;

— In the lung there is high concentration of oxygen gas in which combine with red pigment called haemoglobin and form - oxyhaemoglobin. This is unstable compound which release oxygen by diffussion when rich to the body tissues.

-Haemoglobin + oxygen ⟷ oxyhaemoglobin

— Then oxygen diffuses out of the red blood cells through the capillary walls to the tissue.

6b(ii) Carbondioxide transport:

- This occur when carbondioxide is combined with haemoglobin in the red blood cells and form carbaminohaemoglobin, this combination occurs in the tissue. The formed compound is transported to the lung for exhalation were 70% as bicarbonate ions, 23% combined with haemoglobin, 7% dissolved in ~~the~~ plasma.

∴ Carbondioxide + haemoglobin ⟷ carbamino haemoglobin.

equation = ~~2~~ 1 mark @

explanation = 2 mark @

7(i)

Bacteria cell	plant cell
(a) Lack true nucleus.	Has true nucleus
(b) Do not have membrane bound organelles.	Have membrane bound organelles.

2 mark @

7(ii) BACTERIA CELL DIAGRAM.

(well labelled diagram 6marks)

8(a) ~~(i) (ii)~~ Binomial nomenclature rules.

(i) All scientific names must be written in latin language or if in a different language the name must be latinised

(ii) The name should have two parts, the first part represent the genus and the second represents the specific epithet.

(iii) The generic name is written before the specific epithet.

(iv) The generic name must start with a capital letter and specific

(1mark @)

8b(i) Advantages of natural classification.

(a) shows natural relationships

(b) Based on many characteristics

(1mark @) any correct point

Disadvantages of natural classification.

(a) Difficult to classify some organism

(b) Requires detailed study (any other points)

1mark @

9(a) Consequences of bad eating habits.

(i) Too much sugar, an individual may experience ~~of~~ a problem of diabetes or obesity.

(ii) Low fibre, an individual may experience the problem Constipation.

(iii) Too much fat, an individual may experience the problem of ~~dehydration~~ heart diseases or obesity.

Q4(iv) Not enough water an individual may experience the problem of dehydration and kidney problems. (1mark @)

(b) (i) In the mouth, alkaline solution is due to presence of saliva (amylase) which works best in alkaline solution.

(ii) In the stomach, acidic medium is due to presence of hydrochloric acid (pepsin works best in acidic medium)

(iii) In the Ileum, alkaline solution is due to presence of bile and pancreatic juice that work best in the alkaline solution.

(2marks @)

10. Important of Transport in Living things.

- Transport of oxygen for respiration, ~~example~~
- Transport of digested food
- Removal of waste products.
- Distribution of hormones
- Transport of water and Minerals
- Maintenance of temprature balance.

And any other correct points.

- Introduction (1½mark)
- Mainbody 6point (1mark@)
- explanation 1mark@
- Conclusion. (1½mark)

TOTAL = 15 marks.