

TANZANIA HEADS OF ISLAMIC SCHOOL COUNCIL

FORM SIX INTER ISLAMIC MOCK EXAM

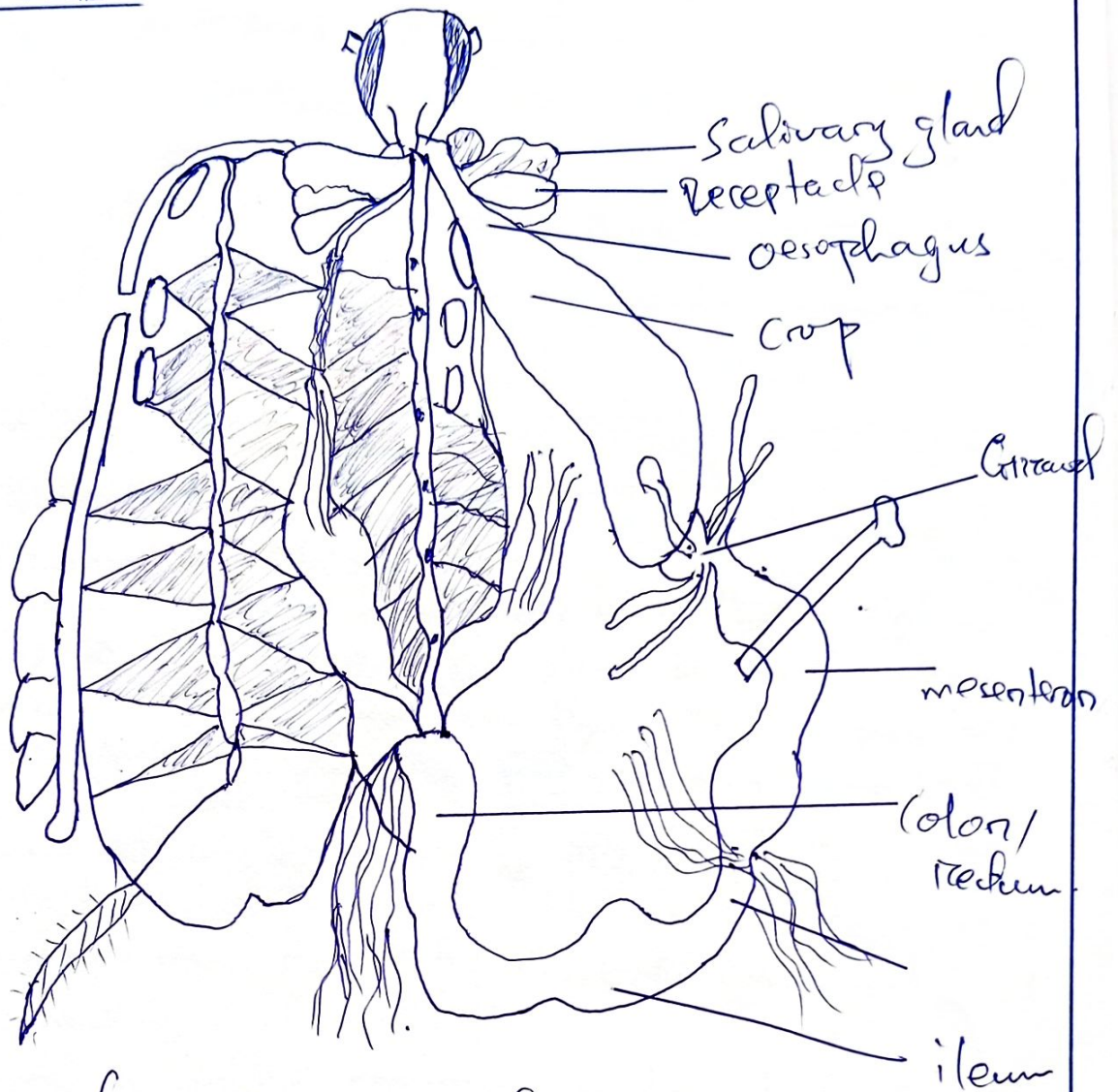
BIOLOGY 3

MARKING SCHEME - 2024

133/3A

MARKING SCHEME

1(a)



General view of dissected cockroach

H - 01

Mg = 01

D. = 02½

L = 02½

Total 07 Marks

1(b) If the following part were removed;

(i) Crop store food temporary, so specimen S will fail to store food

(ii) Gizzard contain sand helps in physical digestion, so specimen S will not undergo physical digestion.

any 2 point @ 01 marks = 02 MARKS

1(c) Adaptation of cockroach to its life (specimen S)

- Exhibit negative phototaxis
- Presence of Compound eye that detect sight/light stimulus
- Presence of spiracle/tracheoles system for gaseous exchange
- Presence of wings that allow flying from one place to another for mating, searching food and moving away from predator
- Presence of antennae, legs, and Abdominal Cerci for sensitivity
- Have pheromones, the chemical used for communication and coordination.
- Presence of Jointed appendage for locomotion.
- Dorso-ventral flattened body enable organism to move in restricted area such as cracks or borrowing places

any 6 points @ 01 marks = 06 MARKS

2(a)

The aim of experiment was to DETERMINE/IDENTIFY NUTRIENTS Present in sample solution X. any 01 point = 01 mark = 01 MARK

2.(b)

Food test report

TEST TUBE	OBSERVATION	INFERENCE
1	The colour of mixture sample X was changed to <u>BLUE BLACK</u> colour	<u>STARCH WAS PRESENT</u>
2.	The colour of the mixture sample soln X was changed to <u>PURPLE</u> colour	<u>PROTEIN WAS PRESENT</u>
3.	The colour of mixture sample solution X <u>retained blue</u> colour of <u>BENEDICT</u> solution	<u>REDUCING SUGAR WAS ABSENT</u>

• any 3 point (OBSERVATION) @ $00\frac{1}{2}$ = $0\frac{1}{2}$ MARKS

• any 3 point (INFERENCE) @ $00\frac{1}{2}$ = $0\frac{1}{2}$ MARKS

2.(c)

function of Identified food

starch

- Used as a food storage molecule in plant.
- Starch is polysaccharide when hydrolysed it is a source of Monosaccharide like glucose in a body

any 1 point @ 01 mark = 01 mark

PROTEIN

- Used to build body and repair body tissue
- Help in formation of cell membrane
- Help to make Enzyme
- Help to make antibodies
- Help to make hormone
- Help to make structure of body Eg. Keratin in hair

any 01 point @ 01 mark = 01 mark

2.(d)

Source of Identified food:

* Starch - source

- Cassava, yams, Rice, wheat,

any 01 point @ $00\frac{1}{2}$ mark = $00\frac{1}{2}$ mark

* Protein-source

- Eg, milk, Beans, mushroom, Soyabeans

any 01 point @ $00\frac{1}{2}$ mark = $00\frac{1}{2}$ mark

2.(e)

(i) PROTEIN

01 point @ 01 mark = 01 mark

(ii) Parts of digestive system where it is Digested are:

- in the { - STOMACH
- DUODENUM
- ILEUM

any 2 point @ 01 mark = 02 MARKS

(iii) KWASHIDOROKO

- any 01 point @ 01 mark = 01 mark.

(-4-)

2 (f)

The food substance that its chemical digestion starting in the mouth is STARCH - any 01 point @ 01 mark = 01 mark

2. (g)

(i) SALIVARY AMYLASE (PTYALIN) - any 01 point @ 01 mark = 01 mark.

(ii) No chemical digestion of starch in the stomach

any 1 point @ 02 marks = 02 MARKS

3. (a) Identification of specimen E to I.

SPECIMEN	COMMON NAME
E	SPIDER
F	BEEBLE
G	EARTHWORM
H	MAIZE GRAIN
I	TILAPIA FISH

any 5 point @ 01 mark = 05 MARKS

(b) The difference between E (spider) and F (beetle)

SPECIMEN E	SPECIMEN F
- They are body divided into two segment (Cephalothorax and Abdomen)	- Their body has 3 division (Head, Thorax, abdomen)
- They have four pair of jointed legs	- They have 3 pair of jointed legs
- They lack wing	- They have wing
- They lack antennae has pedipalp	- Has one pair of antennae

any 3 difference (Points) @ 01 mark = 03 MARKS

(c) Classification of G to class level (Earth worm)

Kingdom : Animalia

Phylum : Annelida

Class : Oligochaeta

any 3 point @ 00 1/2 = 01 1/2 MARKS

(d) Economic Importance of specimen G (Earth to farmers): -

- They contribute to soil aer (aeration) by making hole as soil porosity
- They facilitate easily penetration of roots through burrow
- They make a burrow that facilitate water infiltration of water in the ground
- Earth worm facilitate decomposition of organic decaying matter to release nutrients for plant growth
- They facilitate Microbial activities in the soil that helps the soil retain its fertility

any 4 point @ 00 1/2 mark = 02 MARKS

3(e) The type of Germination of Specimen H (Maize) is HYPOGEAL GERMINATION
any 01 point @ 01 mark = 01 marks

(f) Adaptation of Specimen I (Tilapia fish) to its life:-

- They have laterally flattened tapers at both end for easy movement in water
- They have pairs of fins (Pectoral/Pelvic fins) for swimming
- A body surface is covered by overlapping scale for protection
- They have swim bladder that enables them to float easily and simplify their swimming to the different parts
- Has streamlined body shape that enable them to overcome water current/resistance during swimming
- Has lateral line that runs along its body that help them to sense vibration and water pressure

any 5 points @ 0.5 mark = 0 2 1/2 MARKS