PRESIDENT'S OFFICE
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT
IRAMBA DISTRICT
FORM TWO PRE NATIONAL ASSESSMENT SERIES 2
BIOLOGY MARKING SCHEME 2023

Qn1 1 @ = 10 MARKS

Romans	i	ii	iii	iv	v	vi	vii	viii	ix	x
Answer	A	A	D	A	C	C	C	C	D	C

Qn2 1@ = 5MARKS

LIST A	i	ii	iii	iv	v
LIST B	C	F	H	A	G

SECTION B (70marks)

3.a. (i). Biology laboratory has models example human skeleton ear, eye ,heart. 1mark@5

(ii) Biology laboratory has specimens either alive or preserved

(iii). Biology laboratory has cages for keeping live specimens like mice

(iv) Biology laboratory has aquaria for keeping live aquatic animals like fish

(v) Biology laboratory has special apparatuses like microscope, dissecting kits ,sweep nets and hand lens

(b) Apparatuses for:

i) storing test tubes..... test tube rack. 1mark@5

ii) Measuring mass of a substance.....Beam balance

iii). Magnifying small objects..... microscope and hand lens

(iv) Catching small insects.....pooter

(v) Determining temperature of liquid..... Thermometer

4. a) Puberty...is the stage when the children begin to mature biologically, psychologically and socially and bodies become capable of reproduction. 2marks

(b) Four ways of maintaining personal hygiene during puberty. 1marks@4

- Taking baths daily
- Wearing good and clean clothes and shoes
- brushing teeth everyday, keeping nails short
- Regular change of clothes, bed sheets and under wears. For girls should wear quality sanitary pads during menstruation and change them

(c). Four requirements of personal hygiene. 1mark@4

- . Advice from other people to improve yourself
- .You need for soap
- You need towels
- You need basin
- You need comb, brushes, toothpaste and toothbrush, scissors

5 a) Biology laboratory is special room designed to conducting biological experiments. 1mark

(b). Importance of the following qualities of biology laboratory.

(i). Adequate space

-to facilitate free movement in the lab. 2marks@

- allow students to carry out their experiments effectively

-to reduce chances of occurance of accidents

(ii) Proper lighting.

Help students to see instructions .

Enables students to see warning signs.

Enables students to see safety symbols on containers and

Enables students to see procedures clearly

(iii)Fume chamber.

To emit harmful and toxic gases like chlorine gas

(iv) Good ventilation.

- To provide good air circulation

- removal of fumes and gases and prevent suffocation

-Prevent laboratory users from exposure to toxic substances

6(a)

Organism	Respiratory organ
Birds	LUNGS
Fish	GILLS
Sheep	LUNGS
Maize leaves	STOMATA

1markeach

(b)(i) Gaseous exchange : Is the movement of oxygen and carbon dioxide across the respiratory surfaces 2marks

(ii). Reason(s) for the following

- Thin walls: to reduce the diffusion distance
- Moist surfaces :in order to dissolve gases that diffuse in a solution form
- Highly branched: In order to increase surface area for gaseous exchange
- Large number of blood capillaries: So that gases can be taken to and from the cells easily 1mark each

7. (a) i. Prokaryotes are the single celled organism that does not posses nuclear membrane in their nucleus eg . bacteria. WHILE. Eukaryotes are organism whose organelles are enclosed in membranes. 2marks

(ii) .Four components of the cell theory

- All living things are composed of cells
- Cells are the basic unit of structure and functions of living things
- All cells are produced from other cells
- Cells contains inherited information which controls their activities
- All cells are basically the same in chemical composition

- All life processes take place in the cells. (any four points). 1mark each

(b). Difference between cow(animal cell) and onion cell (plants cell)

Cow cell	Onion cell
Has no cell wall	It has cell wall
It is irregular in shape	It is regular in shape
Has small and temporary vacuole	Has large and temporary vacuole
Nucleus is centrally positioned	Nucleus is placed at the periphery
It lacks chloroplast	It has chloroplast
It stores food in form of glycogen	It stores food in form starch

1mark each

8.(a) Classification :Is the process of grouping organisms according to the similarities and differences. 2mark each

(b).Four Reason for classifying organisms

- For easy study and identify them due to common characteristics
- Makes easy communication among biologist in the world. 1mark each
- Enables scientists to predict characteristics of an organism based on characteristics of group it belongs.
- Help to understand how organisms are related in term of their evolutionary history

(C) Four Reasons for why car is not considered as living things

- It does not respire
- It does not grows and develop
- It does not reproduce
- It does not sense. 1mark eachx4=4marks
- It does not feed

9.(a)i. Food chain :Is the diagrammatic representation, which shows the sequence of organisms through which the energy flows and each organism is the food of the next one in the sequence 1matk each

(ii)Food web: Refers to a network of food chain that are interconnected at various trophic levels to form many feeding connections among different organisms. 1mark

(b) All possible food chains include:

Grass → giraffe → lion → mucor

Grass → cow → hyena → mucor

Grass → giraffe → hyena → mucor

Grass → cow → lion → mucor 1mark@4=4marks

SECTION C (15 marks)

question (10)

Elaboration on methods of food preservation

SALTING

CURRING

DRYING IN SUN.

SMOOKING.

COOKING.

FERMENTATION.

PASTEURIZATION

LIQUEFACTION

CANNING AND BOTTLING

ADDITIVE METHOD

IRRADIATION

Intro. 1.5 mark

6Point=1mark

Explaination=1mark

Conclusion 1.5 marks