PRESIDENT'S OFFICE.
REGIONAL ADMINSTRATION AND LOCAL GOVERNMENT.
SINGIDA MUNICIPAL COUNCIL.
FORM FOUR PRE NATIONAL EXAMINATION.
CODE: 033/1 _BIOLOGY - 1.

CODE: O33/01 BIOLOGY 1

TIME: 3:00 HRS AUGUST 2023

MARKING SCHEME

SECTION A (16 MARKS)

1. 01 mark @=10marks

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

2. ***01 mark @=06marks***

LIST A	i	ii	iii	iv	v	vi
LIST B	D	M	E	H	L	C

SECTION B. (54 marks)

3. (a) i . Bacteria ***(01 mark)***
ii. Kingdom Monera ***(01 mark***)
iii. Diagram (***01 marks)***
Labelling :any ***3@0.5 total 01.5 marks***
Caption***: 0.5 mark***

(b) In order to avoid body odour and diseases during puberty the following should be done;
-Take bath at least twice a day as a body produce more sweat at this stage
-wear clean clothes all the time, wash dirty bedding and clothes frequently.
-Girls should wear clean and quality sanitary pads during menstruation and change them frequently
-using a new sterilized razor blade and scissor when shaving
(01 mark @=03marks)

(c) Because HIV weaken the immune system by destroying T-helper cells, hence the body cannot fight diseases like TB which a body with strong immunity can fight (***01 mark)***

4.a. (i) When fish is in water uses gills for gaseous exchange but when fish placed on the land gills tend to collapse (close) hence gaseous exchange stops, then fish dies due to lack of oxygen gas

OR

Fish can absorb dissolved oxygen but cannot utilize dry oxygen on the land. (***01.5 marks)***

(ii) Soon after stopping exercise the rate of breathing remain high so that to pay oxygen debt, that will be used to oxidize lactic acid accumulated in muscles ***(01.5 marks)***

(b) (i) ILEUM ***(01 Mark***)

(ii) Adaptation of Ileum for absorption

-Its very long about 6m to ensure maximum absorption of end product of digestion

-It has thin wall for easy absorption and diffusion of the nutrients in the body.

-It is highly folded to increase surface area for absorption

-The inner membrane has microvilli to increase surface area for absorption

Any four points 4 @01=04 marks

(c) A plant with yellow leaves have few chlorophyll hence the rate of photosynthesis slow which causes low yields while the plants with green leaves have many chlorophyll hence high rate of photosynthesis (***01 mark)***

5. (a)i. The endocrine system will respond through Adrenal gland to secrete adrenaline hormone which help to prepare the body for emergency during fight and fighting action (***02 marks)***

(ii) Effects of secretion of adrenaline in the body

-increase of blood pressure

-increase of rate of heart beat

-increase of level of blood sugar

-increase of supply of blood to muscles

Any three points 3@1=03 marks

(b) Mechanism of blood sugar regulation ***(03 marks)***

-when the level of sugar in the blood raises pancreas produce insulin hormone which convert glucose to glycogen and store it into the liver and muscles cell.

-when the level of sugar in the blood fall in the blood pancreases produce glucagon hormone which direct liver cells to convert glycogen to glucose, then glucose is released to the blood stream to restore the level of blood sugar.

(c) It is advantage for human being to excrete urea because it is less toxic and it does not require large amount of water to excrete since it is less soluble in water. While Ammonia is very toxic and very soluble hence it require large amount of water ***(01 mark)***

6. (a)i. This is because pathogens develop features that help it to become resistant to drugs slowly as time goes due to evolution (***02 marks)***

ii. Evidence of organic evolution

-comparative anatomy

-comparative embryology

-comparative physiology

-vestigial organ

-evidence from biogeography

-cell biology

-paleontology

- Genetic variation

Any three points 3@1= 03 marks

(b) factors affecting growth and development in human

-quantity and quality of food

-diseases

-stress

-genetic factor

-mental state

-growth hormone

Any four 4@1= 04 marks

7 (a) Its common to female because it carried in X chromosome (***02 marks***)

(b)

(c) Difference between DNA and RNA

DNA	RNA
It has double strand	It has single strand
Has Deoxyribose sugar	Has Ribose sugar
Has thymine	Has uracil
Found in the nucleus	Found in cytoplasm

(***01 mark @ 3 points=03 marks***)

8 (a) It is possible because plants consume large amount of carbon dioxide during photosynthesis (***02 marks***)

(b) Importance of breast feeding

-it safe from contamination of bacteria

- Contain colostrum which increase body immunity of the baby

- It contain right temperature needed by the baby

-Does not require preparation hence it save time

(***01 mark@ 3 points=03 marks***)

(c)Diagram = (***02 marks***)

Labelling =(***0.5 @ 3 parts=1.5 marks***)

Caption = (***0.5mark***)

SECTION C

9. Factors affecting the rate of gaseous exchange

-carbonidioxide concentration

-Haemoglobin concentration

-Physical activities

-Healthy status

-Attitude

-Age

Introduction (02 marks)

main body 6 points @ 2marks =12 marks

conclusion 01 mark

10. Factor affecting transpiration

Plant factor

- Size of the leaf
- An extensive roots
- Leaf cuticle
- Position of stomata
- Sunken stomata

Environmental factor

introduction (02 marks)

main body 6 points (3 external and 3 internal @ 2=12 marks)

conclusion 01 mark

- Temperature
- Relative humidity
- Wind and air movement
- Soil moisture
- Atmospheric pressure

11. prevention and control of HIV/AIDS

-ABC

-Avoid sharing of sharp objects eg syringes

-Avoid unscreened blood transfusion

-Organ transplant should be done careful to ensure no HIV infection

-Wearing gloves when attending a sick person or touching other people body fluids

Introduction 02 marks

Main body 6 points 2@=12 marks

Conclusion 01 mark