CHRISTIAN SOCIAL SERVICES COMMISSION
An Ecumenical Body of Tanzania Episcopal Conference and Christian Council of Tanzania
P.O. Box 9433, Dar es Salaam, Tanzania

CSSC-SOUTHERN ZONE FORM TWO JOINT EXAMINATION

033 BIOLOGY **AUGUST 2024**

MARKING SCHEME

1.

I	Ii	iii	iv	v	Vi	Vii	viii	ix	x
B	A	C	A	B	A	B	D	B	C

@1 mark = 10 marks

2.

i.	ii.	iii.	iv.	v.
F	A	C	H	E

@1 mark = 5 marks

3. a) Should wear laboratory coat(lab coat).

ii) Hairs should be tied back.

iii) Should not wear open shoes/ should wear shoes that cover foots all sides.

iv).They should not wear high heeled shoes instead should wear flat shoes (simples).

v) Should not wear loose clothes as they can catch fire or cause a student to fall down.

Any four points (4 marks@1 mark).

b) Qualities of a good laboratory

(i) Adequate space
(ii) proper lighting
(iii) well ventilated
(iv) storage room
(v) water supply system
(vi) sewage system
(vii) gas supply
(viii) rough floor

Any six points (1 marks@ = 6 mark).

4 (a)

S/N	CRITERIA	CELL WALL	CELL MEMBRANE
(i)	**PERMEABILTY**	Permeable to materials	Selectively permeable
(ii)	**COMPOSITION**	Made up of cellulose	Made up of proteins and lipids
(iii)	**STATE OF LIVING**	Made up dead cells.	Made up of living cells

(@1 mark = 6 marks)

b) The following cells are specialized to their roles in the following ways:

i) Palisade cell:
- They contain a high number of chloroplasts for traping sunlight for photosynthesis.
- Their elongated shape maximizes the surface area for absorption of light.

ii) Root hair cell:
- The have long, thin projections called root hairs that increase the surface area for absorption.
- They have concentrated cell sap for absorption of water by osmosis

iii) White blood cells:
- They can change their shapes so as to engulf and destroy harmful microorganism.
- Some contain digestive enzymes which destroy microorganism.

iv) Red blood cells:
- They lack nuclei and bi – concave in shape this provided a large surface area for transporting oxygen from the lungs to various parts of the body.
- They contain hemoglobin which carries oxygen to different parts of the body.

Any 1 @ 1 mark = 4 marks

5. a) **How to provide First Aid to a vomiting victim:**
- Place the patient in a safe and clean place
- Make sure that the patient is seated or lying on the side so as to prevent chocking.
- Give the patient plenty of fluids with a mixture of salt sugar and lemon or ginger juice to prevent nausea.
- Give the patient a lot of fruit juice to restore water, mineral salts and energy
- If vomiting persists, take the patient to a nearby health facility immediately

5 marks

b) Importance of providing First Aid and school and home
- Save life
- Prevents conditions from getting worse
- Reduces pain
- Reassures the victim

@ 1 mark

= 5 marks

6. a) **Way through which HIV can be spread:**
- Having unprotected sexual intercourse with an infected person.
- Blood transfusion from an infected donor
- Organ transplant from an infected donor
- Using unsterilized surgical or skin piercing instruments such as scalpels, needles, and circumcision blades that have been contaminated with blood containing HIV.
- Sharing toothbrushes, shaving blades or nail cutters with an infected person.

@ 1marks

= 05 marks

b) **Effects of HIV and AIDS:**
- Reduced labour and production force
- Families spend a lot of money to treat patient with HIV and AIDS. This money would have been used for other needs such as food and education.
- Increasing number of orphans, thus adding a burden to relatives and the society.

1 @ marks

= 5 marks

- Stress, stigma and discrimination to some victims of HIV and AIDS.
- High cost of treatment and purchase of drugs incurred by the government
- Reduced life expectancy.

7a) 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 @ = 4 marks**

b) (i) Anaerobes (1 Mark)

(ii) Obligate anaerobes and facultative anaerobes (1 Mark@ = 2 MARKS)

c) Application o anaerobic respiration

(i) Sewage treatment
(ii) Fermentation of alcohol
(iii) Production of lactic acid (Any two 1.5 Mark@ = 3 MARKS)
(iv) Baking industry
(v) Production of biogas

8. a)i) Cell membrane
ii) Nucleus
iii)Cell wall
iv)Cytoplasm
v) Ribosomes

@ 1 marks

= 05 marks

b) i) **Arteries** (Aorta, Entries, Arteriole)

ii) **Veins** (Venacave, Vein, Venule)

iii) **Capillaries.** (Arterial capillaries, venous capillaries).b ***@ 1 mark = 3 marks***

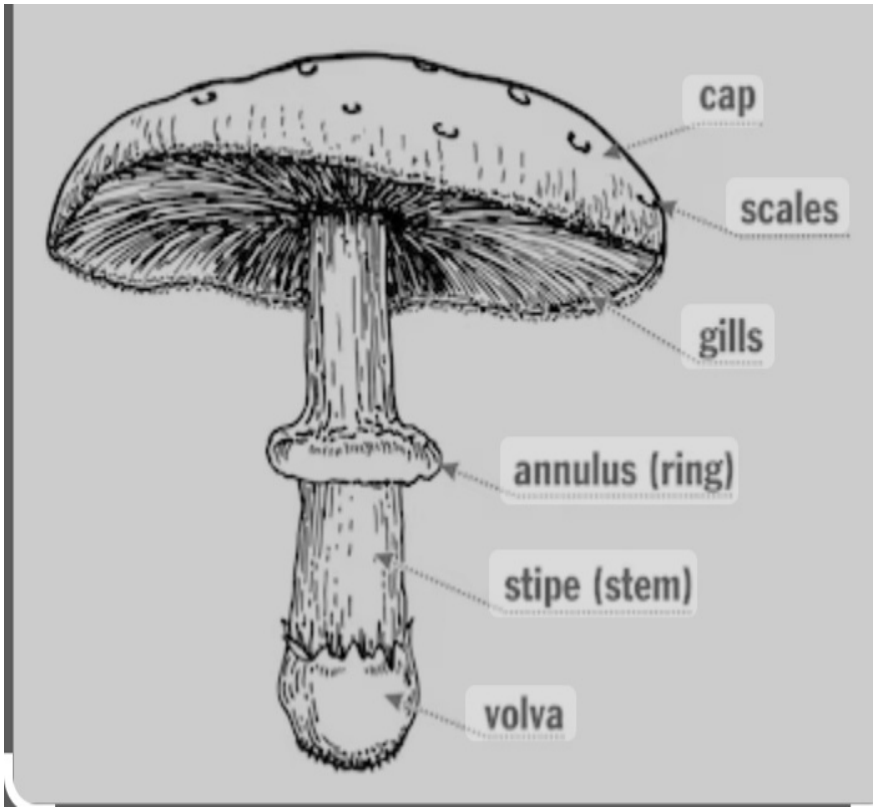
c) The main function of aorta is to carry oxygenated blood from the heart to other parts of the body. ***2 marks***

9. a) i) Mycologists ***(1 mark)***

ii) Fungi are not green in colour because they do not have chloroplast contain chlorophyll (fungi lacks green pigment called chlorophyll) ***(1 mark).***

iii) Because fungi cannot make their own food, first trophic level is occupied by producers such as green plants and photosynthetic bacteria as well as photosynthetic protozoan's since they can make their own food. ***(2 marks).***

iv) **DIAGRAM OF MUSHROOM**



(3marks; 2 marks for diagram, 1 mark for labeling)

b) i) Should take bath at least twice per day.

ii) Should wear clean clothes every time.

iii) Should wear sanitary towels or pads during menstruation.

iv) Should shave hairs in armpits and pubic areas.

Any three points (3 marks@1 mark).

10

- Introduction *(2 marks)*

Main body {Characteristics of living things}

- Ability to move(movement)
- Ability to reproduce(reproduction)
- Ability to excrete(excretion)
- Ability to feed or eat(nutrition) (any six points @ 2 mark = 12 marks)
- Ability to detect and respond to stimulus(sensitivity)
- Ability to respire(respiration)

Conclusion *(1 mark)*