



**STAREHE GIRLS' CENTRE MOCK EXAMINATION 2025**

# **Form 4**

# **Paper 1 BIO**



# **MARKING SCHEME**

- 1
  - a) lysosomes
  - b) chloroplast
  - c) mitochondria( answer must be in plural)
  
2.
  - a) intermittent growth curve
  - b) Arthropoda( correct spelling)
  - c) moulting
  
3.
  - a) mirror  
Diaphragm
  - b) total magnification =eyes piece lens magnification  $\times$  objective lens magnification  
 $1000 = 10 \times y$   
 $100/10 = y$   
 $y = \times 100$
  
4.
  - a) A- Hydrogen ions  
B- carbon iv oxide  
C- carbohydrates ( accept glucose)
  - b)
 
$$6\text{CO}_2 + 6\text{H}_2\text{O} \xrightarrow[\text{sunlight}]{\text{chlorophyll}} \text{C}_6\text{H}_{12}\text{O}_6 + 6\text{O}_2$$
 (accept word equation)
  
5.
  - i) skull; pelvic bone
  - ii) ankle; wrist
  - iii) knee ; elbow
  
6.
  - a) condensation
  - b) ribosome
  - c)
    - i) Q- Polypeptide
    - X- peptide bond
  
7.
  - a) nitrogen
  - b) form the structure of animal fossils/ keratin in hair/ collagen in tendons and ligaments/ form myosin in muscles/ form enzymes and hormones/ form casein in milk/ source of energy during starvation

8. i) centriole- produce spindle fibres  
ii) centromere- holds chromatids together/ provide point of attachment to spindle fibres
9. AB and B
10. i) sori- Pteridophyta  
ii) sporangium- Bryophyta (for all spelling must be correct)
11. a) i) the rubber balloon- lungs  
ii) syringe case – thoracic vertebrae  
iii) the plunger – diaphragm  
b) the balloon become inflated
12. a) Alleles- contrasting pair of genes  
b) Heat from the body is not lost to the surrounding through sweating because evaporation of sweat will below; as air is already saturated  
c) hypothalamus
13. a) *Entamoeba Histolytica*  
b) *Candida albicans*
14. a) ability of the body to recognize foreign antigens and develop mechanisms of destroying them/ ability to resist infections  
b) natural immunity is inborn/ inherited/ passed from parents to offspring while acquired immunity is obtained in life( can only score 2 mks or zero)  
c) Tuberculosis/ Poliomyelitis/ Diphtheria (mark the first to appear)
15. a) green plants → grass hopper → lizard → domestic cat  
Green plants → mice → snakes → hawks  
Green plants → mice → snakes → domestic cat  
b) most plants will die/ dry ; some animals may starve to death

16. Acts as valves that close and/or open various parts of the canal/ controls food movements in alimentary canal by acting as valves
17. a) A- condensation  
B- Hydrolysis  
b) sucrose  
c) glycosidic
18. a) tannins – tanning hides and skin  
b) colchicines – cause polyploidy  
c) quinunine- used as an anti-malaria drug
19. thin cell wall; has large air spaces
20. a)  $4.0 - 0.04 / 0.04 \times 100 = 90\%$   
b) oxygen concentration reduces because it is used in respiration to produce energy ; carbon iv oxide increases greatly because it is produced during respiration as a by-product ; nitrogen gas concentration remained constant because it is neither used or produced by the body
21. a) change in body form during the life cycle of an organism  
b) in larvae stage there is a vigorous feeding; hence the insects obtain enough nutrients/ food
22. a) cohesion- water molecules cling to each other maintaining continuous column of water/ preventing the break of water column  
b) adhesion- water molecules cling to the sides of xylem walls
23. a) to breakdown the sucrose solution to simple sugars  
b) non- reducing sugar/ disaccharide  
c) i) starch  
ii) glycogen
24. Cells are loosely arranged; to facilitate air circulation

Cells have moist surfaces; to dissolve respiratory gases

25. a) ultrafiltration- to remove urea/ nitrogenous wastes/ toxic / harmful substances from the blood stream  
b) selective re- absorption- to return useful substances/ glucose and amino acids into the blood stream

26. identity- ribonucleic acid

Reason- presence of organic base uracil

