

FORM 1 BIOLOGY
END OF TERM 2
MARKING SCHEME

1. (i) Entomology ;
(ii) Taxonomy;

2. a) Glucose and fructose;
b) Oxidized (in the cells) to release energy;
Converted (by the liver cells) into glycogen;

3. (a) Photosynthesis to provide hydrogen atoms required in the dark stage of photosynthesis;
Synthesis of more/additional ATP required in the dark stage of photosynthesis;
(b) Starch is insoluble /osmotically inactive(hence does not affect the O.P of plant cells);

4. (a) Magnification = $\frac{\text{Length of drawing/image}}{\text{Corresponding length on specimen}}$ rj Mg =

(b) (i) Studying /viewing live specimen;
(ii) Higher power of resolution;
Higher power of magnification;
5. (a) Diffusion; rj osmosis
(b) Visking is semi-permeable; allowing the smaller molecules of iodine to pass across (to the starch suspension) while the larger starch molecules cannot across (to the iodine solution);
6. osmosis is the movement of water molecules from a region of high water concentration to a region of low water concentration across a semi permeable membrane.

7. (a) Homodonts posses the same type/kind of teeth while heterodonts posses different types/ kinds of teeth;

(b) (i) I $\frac{0}{3}$, C $\frac{0}{1}$, pm $\frac{3}{3}$, m $\frac{3}{3}$;

(ii) Herbivorous; rj herbivore.
8. (a) Catalase;
b-Liver;
c-Breakdown of hydrogen peroxide into harmless products/water and Oxygen

9. (a) Has numerous chloroplast;
(b) Has long tail; acrosome; large nucleus. Full of DNA; a chromatin material/numerous mitochondria;
10. A) sites for protein synthesis
B) packaging and transportation of glycoproteins
11. Peptide bond
12. (a) Rate of photosynthesis increase as the CO₂ concentration increases up to optimum level
(and vice versa)
(b) Rate of photosynthesis increases as light intensity increases up to optimum level;
(and vice versa)
13. (a) A – ciliated epithelium
(b) Nasal / trachea epithelium.
14. A) ileum
B) pancrease
15. Sweep net
(ii) Pair of forcep
(iii) pooter
16. (a) A Stroma
B Granular
(b) A Photosynthesis (accept balanced equation)
B Carbon iv oxide fixation (accept a balanced equation)
17. Diameter of cell = $\frac{\text{diameter of field of view}}{\text{number of cells}}$ ✓
= $\frac{2.8}{4}$ ✓
= 0.7mm x 1000 ✓

= 700µm

18. a) Villus
b) S – Epithelium
T – Lacteal
L – Blood capillaries
c) L – Amino acids, glucose
T – Fatty acids and glycerol
d) Supplied with blood capillaries – to transport absorbed products of digestion
Presence of lacteals – To transport fatty acids and glycerol
Lined with thin epithelium for faster absorption of products of digestion
19. (a) Photosynthesis;
(b) Carbon (IV) oxide concentration; (the valency power correctly)
Temperature;
Amount of chlorophyll; **(b) is tied to (a)**
(Any two correct 1x2 =2mks)
20. - (It facilitates the) reabsorption of useful substances in the kidney tubules into the blood stream;
- (It facilitates the) absorption of digested food from the gut into the blood stream;
- (It helps in the) movement of waste products from body into the blood stream/excretion of waste products from the body cells into the blood stream; **(Any first two correct 2x1 = 2mks)**
21. Reflect light from the source for the microscope specimen;
Regulate amount of light entering the microscope/reaching the specimen;
Move body up and down in order to obtain a rough focus of image/specimen; **(3mks)**
22. Plant cells have cell wall; cell wall is rigid/cellulose cell wall is strong and rigid to withstand turgor pressure; Or water is absorbed by osmosis; cells become turgid; cell wall create inward pressure that prevent cell from bursting;
23. Emulsification of fats, forms an alkaline medium for enzymes functions,
24. a) X-Chloroplasts;

Y-Vacuole(s);

b) Move to upper part of the cell in order to receive maximum light for photosynthesis (in dimlight);

(3mks)

25.a) Movement of molecule/ions/atoms (acc substances) from a region of high concentration to a region of low concentration; **(2mks)**

b) **Diffusion gradient** **(2mk)**

The higher the diffusion gradient the faster the higher the rate of diffusion; (Acc the converse