ANESTAR SCHOOLS

END OF TERM 2 EXAMS 2018

FORM 2 BIOLOGY MARKING SCHEME

1. (a) (i) The break down of glucose /food nutrient in the cells to release energy;

(ii) Produce energy for cell division;

* Produce energy for transmission of nerve impulse;
* Produce energy for maintenance of body temperature;
* Produce energy for active transport/secretion;

1. a) (i) Coronary artery;

(ii) Coronary thrombosis;

(b) Generate higher/sufficient pressure with which blood is pumped to the body tissues;

1. (a) (i) Tracheole;

(ii) Moist to dissolve diffusing gases;

* Highly branched to increase S.A for diffusion of diffusing gases;
* One – cell thick/thin wall ti shorten distance covered by diffusing gases;

(b) Rapid transport of diffusing gases; to maintain a steep diffusion gradient for efficient gaseous exchange;

1. (a) (i) Production of large amount of urine/diuresis;

(ii) Diabetes insipidus;

(b) Osmoregulation;

1. (a) Alcohol ,Carbon (IV) Oxide and energy;

(b) Brewing;

Baking;

1. (a) X – sieve pore;

Y – Cytoplasmic strands /filaments;

(b) Has (numerous) mitochondria that provides energy for translocation;

Provides food nutrient to the sieve element;

1. Glucose and fructose;

Glucose and galactose;

Glucose and glucose

1. (a) Is the ratio of carbon dioxide produced to Oxygen used during respiration;

(b) RQ= 

1. (i) Help plants conserve water during the day allowing maximum gaseous exchange at night;

(ii) Reduce amount of water loss;

(iii) Windy conditions blow away water from leaf surface increasing transpiration rate;

1. (a) T – Xylem vessel;

S – Endodermis;

(b) Root hair cell;

* Narrow and elongated to increase surface area for absorption of water and mineral salts.
* Thin to reduce diffusion distance.

1. (a) A – Concentration of salt was isotonic; to that of the cytoplasm of the Red blood

cells hence no change;

1. B – most cells haemolysed; due to hypotonic salt solution;
2. (i) (3 + 3 + 3 + 1 + 2 + 3) x 2

= 15 x 2 = 30; teeth

Or (I 0/3, C 0/1, PM 3/2, M 3/3) x 2; 30

(ii) Herbivore

(iii) Heterotrophic;

1. (a) Its actively reabsorbed back to blood system within the proximal convoluted tubule;
2. - Anti-diuretic hormone (ADH)

- Aldosterone

1. (a) - Regulation of body temperature.

- Regulation of pH of fluids;

- Defence against disease-causing micro-organism / pathogens; rej. diseases;

- Prevent bleeding / enhancing clotting;

1. Coronary thrombosis / varicose veins / arteriosclorosis / Antheroma / cerebral thrombosis;
2. (a) Presence of antibodies; and white blood cells in blood that kill / destroy pathogens;
3. Higher concentration of oxygen in pulmonary vein / higher concentration of carbon (IV)

oxide in pulmonary artery;

1. Haemocoel Trachea Ostia Spiracles

√Naming

√For the arrows direction

1. (a) Osmosis;
2. The visking tubing will become turgid / increase in volume / bulge / become big / expand;
3. Water moves from beaker into visking tubing; by osmosis; the semi-permeable tubing;

making tubing turgid, big, expand / bulge, increase in volume

1. Different structures absorbs stain differently hence become more distinct/clearer, visible.
2. Rate of water absorption is more than water loss/transpiration and plant droops
3. a) Hydrolyse (breaks down disaccharide/Non reducing sugar to monosaccharide/reducing sugar

b) Neutralize the dilute hydrochloric acid

1. a) (i) Sebum

(ii) – antiseptic -kill pathogens

Makes skin hair be soft/oily

Makes hair flexible/waterproof

b) – actively dividing cells giving rise to the granular layer

- contain melanocyte cells that produce melanin that gives the skin its colour/protects skin against ultra violet rays.

1. – absorption of water

* Packaging of indigestible food material to form feaces
* Secretion of mucus
* Absorption of mineral salts

1. Helps to solve environmental problems, enable one to into certain careers, enables one to develop scientific skills, facilitate international cooperation.
2. Study of body functions