
KENYA NATIONAL EXAMINATION COUNCIL
REVISION MOCK EXAMS 2016
TOP NATIONAL SCHOOLS

BAHATI GIRLS HIGH SCHOOL
BIOLOGY
PAPER 1
MARKING SCHEME

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BAHATI GIRLS KCSE TRIAL AND PRACTICE EXAM 2016
BIOLOGY
PAPER 1 / 231/1
MARKING SCHEME

1. (i) Nucleolus;
(ii) Smooth endoplasmic reticulum;
(iii) Golgi apparatus/body;
2. (a) Anaerobic respiration;
(b) Lactic acid;
(c) Pain/fatigue/muscle cramps;
3. (a) Thigmotropism/haptotropism;
(b) Herbaceous plants;
4. (a) Size of amoeba will not change; but rate of formation of contractile vacuole increases;
(b) Increase in size; and become turgid;
5. (a) Hypothalamus;
(b) Vasconstriction; shivering;
Increase in metabolic rate; Any correct
6. (i) Sunken stomata lower the rate of transpiration by accumulating water vapour in the sub – stomatal air space; Leading to low diffusion gradient thus reducing transpiration rate;
(ii) A high light intensity increases the rate of transpiration as it causes opening of the stomata fully; leading to water vapour diffusing faster from the leaves;
7. (a) Prevents food from being regurgitated into oesophagus during churning in the stomach;
8. (a) Is where alleles are located on the sex chromosomes and are inherited as the sex is determined
(b) (i) Colour blindness/ Haemophilia;
(ii) Premature baldness / tuft of hair in ear pinna / nose / porcupine skin;
9. Gaseous exchange through the respiratory surface;
Absorption of digested food from the gut to the blood stream;
Exchange of materials between the blood capillaries and cells;
10. (a) Ligaments;
(b)

Ball and socket joint	Hinge joint
Allows movement in all planes/360 ⁰	Allows movement in one plane/180 ⁰

(c) Olecranon process; rej. Olecranon alone
11. (a) Transmits / magnify / amplify sound vibrations;
(b) Converts sound vibrations into nerve impulses;
(c) Posture / balance;
12. -Stains adheres to the cells, So that they can be seen clearly / for clear visibility;
-Stains helps to differentiate between various parts of a cell;
13. Development of secondary sexual characteristics ;
14. (a) Exoskeleton;
(b) Moulting;
15. Fatty acids; glycerol;
16. (a) Prevents trachea / bronchi from collapsing during inspiration and expiration;
(b) Increase surface area for gaseous exchange;
17. (a) Carbon IV oxide;
(b) Reducing emission of carbon IV oxide and other green house gases;
Reducing use of wood and other fossil fuels;

- Planting more trees;
18. A – Chromatids;
C – Spindles;
 19. T – Plumule; U – Radicle;
 20. Terrestrial - Uric acid
Fresh water - Ammonia;
Marine - Trimethylamine oxide;
 21. (a) Plasmodium;
(b) Spraying stagnant water; draining stagnant water ;using treated nets / clearing bushes;
 22. Antibody – antigen reaction ; leading to blood agglutination and finally death;
 23. (a) Rhizobium bacteria;
(b) Fix atmospheric nitrogen;
 24. (a) Presence of ADH makes kidney tubules permeable to reabsorption of water;
(b) Regulates the re absorption of sodium ions;
 25. A process whereby nature selects those organisms that are well adapted to the prevailing environmental conditions; enabling them to survive to reproductive maturity; hence reproduce and pass favourable characteristics to their offspring's; while those organisms that are poorly adapted; die young; leaving no organisms and their traits are eventually eliminated;
 26. (i) If no pregnancy degenerates; causing fall in the levels of progesterone in blood; results in menses;
(ii) Secrete progesterone; which brings about / maintains pregnancy / thickening of uterine wall;
 27. Many chambers / long gut to provide large surface area for digestion to take place;
Bacteria in the rumen of caecum to produce enzyme cellulase which digest cellulose into glucose / sugars;
 28. (a) Is the emergency of present forms of organisms; gradually from pre – existing ones;
(b) Are structures of organisms which have evolved from one an central stock; but have undergone modifications to enable them exploit different habitat / ecological niche;
 29. Burning charcoal forms carbon II oxide; which when inhaled combine with haemoglobin to form a stable compound carboxy haemoglobin; which is harmful to man hence causes death;