

## **SMASK**

### **BIOLOGY SCHOOL BREAK ASSIGNMENT**

#### **SENIOR TWO**

#### **TEST ONE**

- 1 a. State the general characteristics of kingdom Plantae (5mks)
- b) . During a field trip, a student came across a plant bearing flowers, and large green leaves with parallel veins. Giving reasons classify the plant from kingdom and class. (6mks)
- c) State
  - i. Three ways in which Bryophytes are similar to Pteridophytes.
  - ii. Three ways in which bryophytes are different from pteridophytes.
  - iii. State one major difference between the rhizoids of a moss and the roots of a fern.
  - iv. State two economic importance of fungi.
2. a) Both bacteria and protozoa are unicellular organisms. Give two main reasons why they are classified under different phyla.
- b) *Plasmodium falciparum*, *Plasmodium vivax* and *Plasmodium ovale*.
  - i) Name the disease that they cause.
  - ii) Name the vector that transmits the parasites.
  - iii) Name the taxonomic group that is common to the three parasites
  - iv) Can these parasites interbreed? Give a reason for your answer.
- c) i) Draw a well labelled diagram of the internal structure of a dicotyledonous stem.
  - ii) Give the functions of the parts labelled.
- 3a) Explain ways by which soil loses its soil fertility
- b) Give ways of maintaining fertility of the soil.
- C i) Define soil erosion
  - ii) State the types of soil erosion
  - iii) Explain the causes of soil erosion
- 4a) Define the term enzyme.
  - ii) State five properties of enzymes
  - iii) Explain five factors that affect the rate of enzyme activity.
- b) Draw a well labelled structure of the alimentary canal of man.

## TEST TWO

1. a) Describe the characteristics of living things.
- b) State 7 differences between plants and animals.
- c) How does movement in plants differ from that of animals?
- d) State why the following processes are essential in living organisms.  
(i) Reproduction (ii) Excretion (iii) Respiration (iv) Irritability
2. a) Using the knowledge about cells, define the following terms.  
(i) Cell specialisation (ii) Tissue (iii) Organ (iv) Organ system
- b) Draw and state the functions of the following cells in living organisms.  
(i) Sperm cell (ii) Nerve cell (iii) Root hair cell (iv) White blood cell (v) Guard cell
- C. i) Draw a diagram to show an animal cell as seen under the light microscope.  
(ii) Give the main functions of the cytoplasm.
3. a) Define the term **vector**.
- b) Describe the adaptations of insects as vectors
- c) Explain the reasons for the success of insects in their habitats
- d) Describe the lifecycle of a cockroach.
4. a) Define the term soil.
- b) State the process by which soil is formed
- c) Write notes on the following;  
(i) Physical weathering (ii) Biological weathering (iii) Chemical weathering
- d) (i) State the components of fertile soil  
(ii) Give three importance of each component of the fertile soil.
- e) Describe an experiment to determine the percentage of air in a soil sample.
5. a) One of the characteristics of living things is nutrition. What is meant by the nutrition?
- b) Write short notes about the following terms  
(i) Autotrophic nutrition (iv). Holozoic nutrition.  
(ii) Photosynthesis (v) Mutualism  
(iii) Saprophytic nutrition (vi). Parasitism
6. For the body to remain healthy it needs to be fed on a balanced diet.
- a) Define a balanced diet
- b) State the food nutrients required for a health living.
- c) State any two food sources of each of the food nutrients listed in (b) above.

**End**