

EXERCISES BIOLOGY S1

I. Multiple choices.

Choose the best answer by encircling a letter corresponding to it. /5marks

Q1. Bryophyllum are modified to:

- a) Form flower for reproduction
- b) Attract insects
- c) Reduce water loss
- d) Form plants

Q2. Which type of leaf is made is made of one blade and one petiole attached to the stem?

- a) Bipinnate leaf
- b) Compound leaf
- c) Pinnate leaf
- d) Simple leaf

Q3. A handlens is used to observe one of the following objects/organisms, which one?

- a) Insects
- b) Protists
- c) Bacteria
- d) Crocodile

Q4. The arrangement of classification units from the **smallest** to the **largest** is as following:

- a) *Species, genus, family, order, class, phylum, kingdom*
- b) *Genus ,family,order,phylum, kingdom, class ,species*
- c) *Kingdom,phylum, class,order,family ,genus,species*
- d) *Species,genus ,family,class,order, phylum,kingdom*

Q5. Modified roots found at the base of a maize stem are known as

- a) Prop roots

- b) Buttress roots
- c) Breathing roots
- d) Fibrous roots

II. Open questions

Q6. . Name the field of Science that specialises in the study of the following: */5marks*

- i) Living things and their environment
- ii) Passing similarities from parents to their offsprings
- iii) Microscopic organisms
- iv) Insects
- v) The cell

Q7. Define the following terms: */4marks*

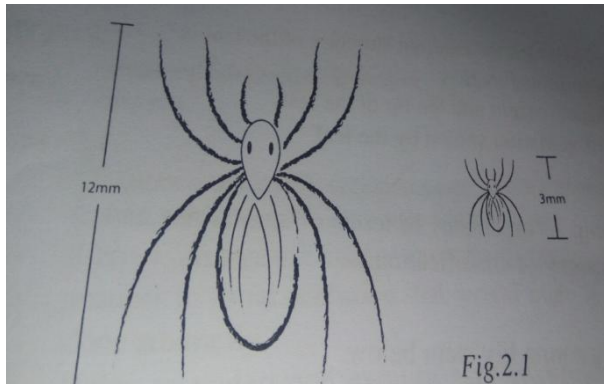
- i) Microbiology:
- ii) Taxonomy:
- iii) Anatomy:
- iv) Photosynthesis:

Q8. a) A student wrote a scientific name of a **black jack (inyabarasanya)** as **bidens Pilosa**.

- i) Identify the mistakes that the student made. */3marks*
- ii) Identify the genus for black jack. */1marks*
- b) Why is it important to classify/group organisms? */2marks*
- c) Which diseases (2) that are caused by bacteria (Monera)? */2marks*

Q9. a) What are the main features of a hand lens? */3marks*

b) Calculate the magnification of the following diagram observed by using a hand lens: */3marks*



Q10. Study the table below and answer the questions that follow:

Taxon	Human being	Lion	Wolf	Domestic dog	Domestic cat
Phylum	Chordata	Chordata	Chordata	Chordata	Chordata
Class	Mammalia	Mammalia	Mammalia	Mammalia	Mammalia
Order	Primates	Carnivora	Carnivora	Carnivora	Felidae
Family	Hominidae	Felidae	Canidae	Canidae	Canidae
Genus	Homo	Felis	Canis	Canis	Felis
Species	sapiens	leo	lupus	familiaris	domestica

a) Which organism in the table is **closely related to the domestic cat**? Give reason for your answer. **/2marks**

b) Which organism in the table is **most distantly related to the domestic cat**? Give a reason for your answer. **/2marks**

Q11. a) Describe the types of modified stems of the following plants: **/5marks**

i) Yam:

ii) Cactus:

iii) Ginger:

iv) Onion:

v) Irish potatoes:

b) Describe the functions of **roots** and **stems** for the plant (Give 2 for each). **/4marks**

c) Draw and label a flowering plant. **/5marks**