NAME: ..... ADM NO: ..... CLASS: .....
FORM THREE BIOLOGY
TERM 1 YEAR 2020
TIME:

Answer all the questions in the spaces provided.

1. What are the main characteristics of kingdom protectista.
(3 mks)

2. Name the spore producing structures in
(3 mks)
(a) Bryopyte – Capsule
(b) Pteridophyta – Sorus
(c) Fungi – Sporangium

3. Study the figure below.

(a) Identify the organism. (1 mk)

Euglena

(b) Give the name of the kingdom to which the organisms belongs.
(1 mk)

Kingdom protoctista

(c) State two characteristics of the members of organisms in the kingdom you have mentioned in (b) above.
(2 mks)

(i) Eukaryotic
(ii) Reproduce asexaially by binary fission
(iii) Have many organelles enclosed by a membrane.

4. Write four differences of plants in the class monocotyledonae and class dicotyledonae

Monocotyledonae	Dicotyledonae

One cotyledone in the seed	Two cotyledons in the seed
Fibrous root system	Tap root system
Have parallel veined leaves	Have network veined leaves
Vascular bundles scattered in the stem	Vascular bundles radially arranged in the stem

5. Name the main method of reproction among bacteria. (1 mk)

Asexual through Binary fision

6. Given the following organisms in a dam, construct a possible food chain for the dam.

Small fish Microscopic algae
Crocodiles Large fish
Mosquito larvae.

Microscopic algae mosquito larvae small fish
large fish crocodiles

7. Name two kidney diseases. (2 mks)

(i) Kidney stones
(ii) Glomerular Nephritis
(iii) Diabetes insipidus

8. Why are plants able to accumulate most of the waste products for long? (1 mk)

Most of the waste products are non toxic while some like oxygen are re-used within the plant.

9. Name three methods used by plants to excrete their waste productions. (3 mks)

(i) Guttation
(ii) Exudation
(iii) Depositon

10. State the conditions in human beings that results to the following:-

(i) Production of large quantities of dilute urine. (1 mk)

When pituitary gland is unable to produce antidiuretic hormone or produces it in inadequate amont, kidney tubules are unable to reabsorb water frosm the glomerulae filtrate.

(ii) Release of aldosterone hormone (1 mk)

When there is higher concentration of sodium salts in the body.

(iii) Release of glucagon hormone. (k1 mk)

When the glucose concentration is lower than normal.

11. Name the class in the phylu m arthropoda which has the largest number of individuals.

Class insecta (1 mk)

12. State two characteristics of fungi. (2 mks)

(i) Basic unit is the hypha
(ii) Cell wall contains chitin
(iii) Eukaryotic

13. Give a sample of urine, name one test you would carry out to determine if it was obtained from a person suffering from diabetes mellitus. (3 mks)

Too a portion of the solution, add an equal amount of Bennedicts solution. Heat the mixture to boil. If the solution turns orange, it indicates presence of reducing sugars.

14. Give a classification of a housefly by filling the table below. (3 mks)

Kingdom	Animalia
Phylum	Arthropoda
Class	Insecta

15. State the changes that occur in arterioles in the human skin during thermoregulation.(2 mks)

When its hot the arteries vasodilate
When its cold the arteries casoconstrict

16. Giving a reason in each case, name the class to which each of the following organisms belong.

Bean plant – Class dicotyledonae

Reason – Two cotyledons in the seed
Tap root system
Bat – Class mammalia

Reason – Has mammary glands
Body covered with fur.

17. State the use of Colchicine (1 mk)

Treatment of gout.

18. Study the plant leaves than answers the questions that follow.

(a) Construct a possible dichotomous key to identify the leaf specimens.
(3 mks)

(b) States the steps followed to identify the leaf specimens.
(7 mks)

Steps followed	Identity
R 1b, 3b, 6a	Mexican marigold
S 1a, 2a, 4a	Napier glass
T 1b, 3a	Bean
V 1b, 3b, 6b	Jacaranda
W 1a, 2b, 5a	Mango
X 1a. 2b, 5b	Hibiscuss
Y 1a, 2a, 4b	Trandescantia

18. (a) 1 (a) Simple leaf ..... go to 2
(b) Compound leaf ..... go to 3

2. (a) Leaf parallel veined ..... go to 4
(b) Leaf network veined ..... go to 5

3. (a) Three leaflets, leaf stalk ..... Bean
(b) More than three leaflets on leafstalk ..... Go to 6.

4. (a) Leaf long and narrow ..... Nappier grass
(b) Leaf broad and short ..... Trandescantia

5. (a) Leaf with smooth margin ..... mango
(b) Leaf with serrated margin ..... Hibiscus

6. (a) Pinnate leaf arrangement ..... Mexican marigold.
   (b) Bipinnate leaf arrangement .....Jacaranda