

GATTU SECONDARY SCHOOL, P.O. BOX 327 – 01030, GATUNDU.

FORM 3 BIOLOGY, MID TERM EXAMINATION. TERM 2 2015.

NAME: _____ CLASS: _____ ADM: _____

1. The number and distributions of stomata on three different leaves are shown in the table below.

Leaf	Number of stomata	
	Upper epidermis	Lower epidermis
A	300	20
B	150	160
C	2	200

a) Suggest the possible habitat of plants from which the following leaves were obtained. (1mk)

A (1mk)

B (1mk)

b) State 3 modifications found in the stomata of leaf C (6mks)

i)

ii)

iii)

3. Whats the importance of the following in an ecosystem.

i) Decomposes (2mks)

ii) Predator (2mks)

4a) Name the bacteria found in the root nodules of leguminous plant (1mk)

b) State the association of the bacteria named in (4a above) with the leguminous plants. (1mk)

5. Give two reasons why primary productivity in an aquatic ecosystem decreases with depth. (4mks)

i)

ii)

6. To estimate the population in size of crabs in a certain lagoon, traps were laid at random. 400 crabs were caught, marked and released back into the lagoon. Four days later, traps were laid again and 374 crabs were caught out of the 374 crabs, 80 were found to be marked.

a) Calculate the population size of the crabs in the lagoon. (4mks)

b) State 2 assumptions that were made during the observations. (4mks)

i)

ii)

c) What is the name given to this method of estimating the population size. (2mks)

7a) Below is an example of a food chain

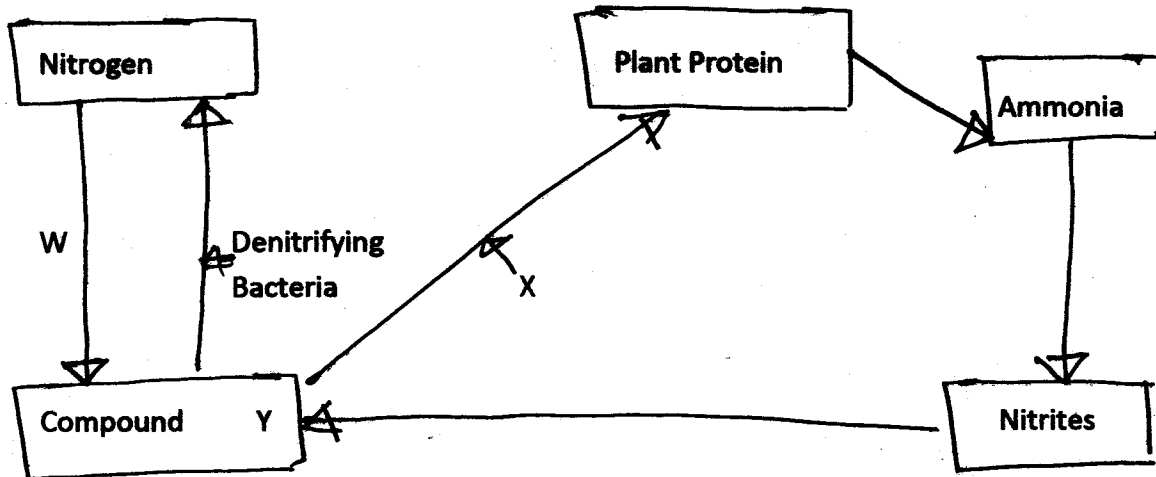
Napier grass _____ mouse _____ Snake _____ Hawk

b) Identify the trophic level occupied by

i) Napier grass _____ (1mk)

ii) Hawk _____ (1mk)

8. The diagram below represent a simplified nitrogen cycle. Study it and answer the questions that follow.



i) Name the organism represented by W (1mk)

Z (1mk)

10a) Define the term ecological niche?

(2mks)

b) What happens when two species occupy the same niche in an ecosystem.

(1mk)

11. Below is a list of organisms, which belong to class insect, myriapoda, and Arachnida.

(Ticks, centipede, praying mantis, tsetsefly, millipede, and spider.)

Place the organisms in their respective classes in the table below and state 2 reasons for each.

(10mks)

CLASS	ORGANISM	REASONS
Insecta		1 2
Myriapoda		1 2
Arachnida		1 2

ii) Name the process X

(1mk)

