HEIGHTS SECONDARY SCHOOL –THIKA
END OF YEAR EXAMINATION 2016
FORM THREE BIOLOGY
21/2hrs

NAME…….

ADMISSION NO……DATE……/……/…….SIGNATURE……..

Answer All Questions (100 marks)

1. **Define the term binomial nomenclature** **(2mks)**

b) A Student writes the name of a house fly as musca domestica.
(i) Which rules were not obeyed in writing the name? **(2mks)**

(ii) Which taxonomical group does the name domestica refers to? **(1mk)**

c) Complete the table to give the description ,differences between beans and maize according to the parts listed below.

Part	Description	
	Bean	**Maize**
Leaf		
Root		
Seed		

(6mks)

d) State the class to which of them belong to.

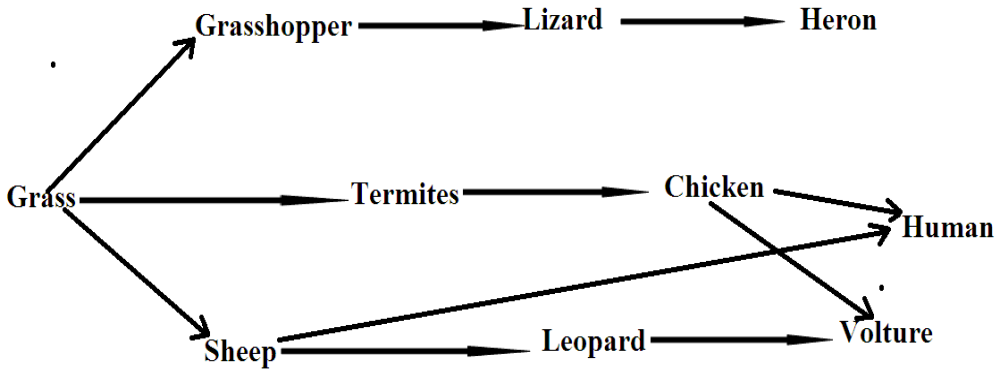
Maize_____

Bean_____ **(2mks)**

2. **Define the following terms.**
i) Population **(2mks)**

ii)Community **(2mks)**

b)Use the food web below to answer the following questions.



i) Name the primary producer. **(1mk)**

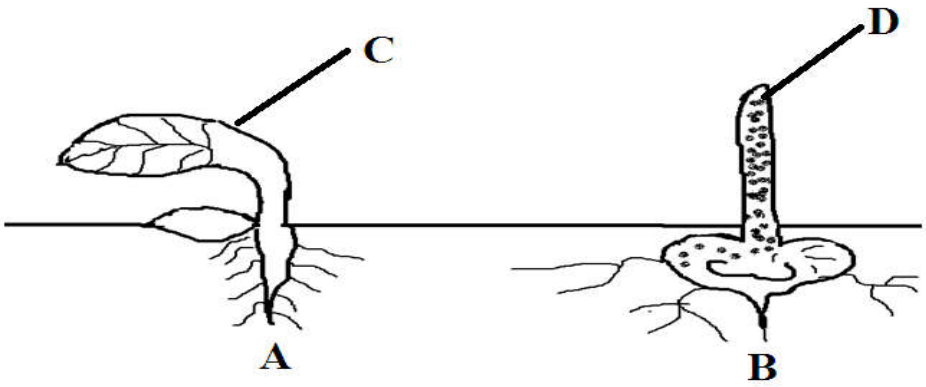
ii)Write a food chain vulture is a tertiary consumer. **(2mks)**

iii) What will be the immediate effect if the grass hoppers are killed . **(2mks)**

3. **State four factors that cause seed dormancy.** **(4mks)**

4. **A) State three functions of water in the germination of a seed.** **(3mks)**

b)Use the diagram's below to answer the following questions



i) Name the type of germination shown by diagram.

A_____

B_____ **(2mks)**

ii) Name the parts labeled .

C_____

D_____ **(2mks)**

5. **List three measurements parameters that can be used to measure growth in plants (3mks)**

6. **State four characteristics of meristematic cell. (4mks)**

7. **Give the functions of the following hormones during menstrual cycle.**

   a) Oestrogen (1mk)

   b)Progestrones. (1mk)

   c) Intelnising hormone (1mk)

8. **Name three materials that are allowed to pass through the placenta from the mother to the foetus. (3mks)**

9. **State two function of the amniotic fluid during pregnancy.** **(2mks)**

10. **Differentiate between seed and the fruit.** **(2mks)**

11. **State three mechanisms that hinders self pollination and self fertilization.** **(3mks)**

12. **Give three methods used to estimate the population of a given organism.** **(3mks)**

13. **Suggest the importance of micro organisms in the root nodules of the plants.** **(2mks)**

14. **State the functions of the following plant tissues.**
    a) Phloem

    b) Xylem

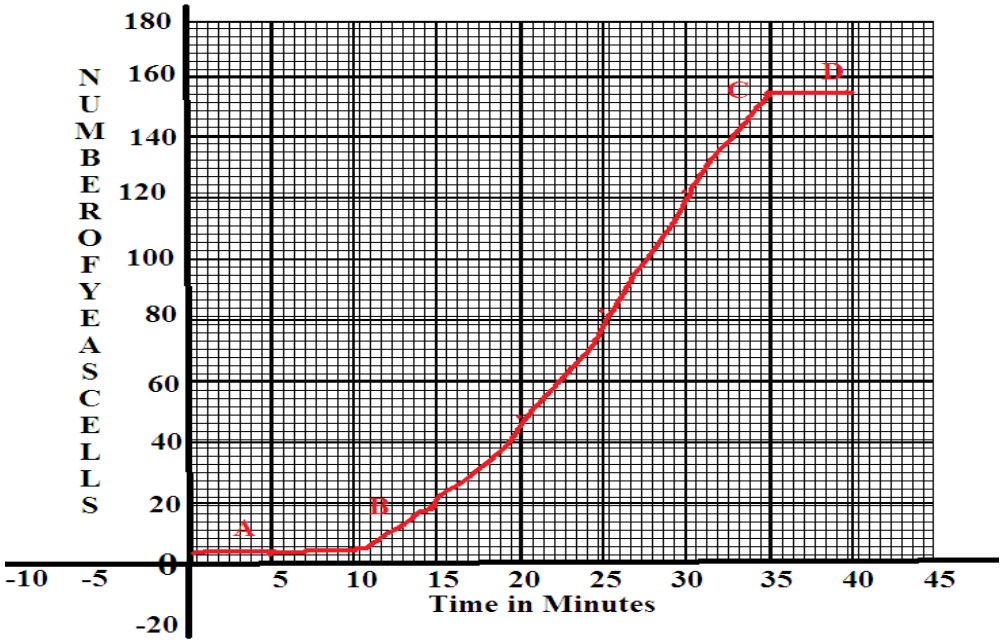
    (2mks)

15. **State the functions of the following cell organelles.** **(2mks)**
    a) Ribosome's

    b) Mitochondrion

16. Name the two growing areas in plants. **(2mks)**

17. **The diagram below represents the increase in the number of yeast cells over a period of 48 minutes .**



a) Name the type of curve shown **(1mk)**

b) Determine the number of yeast cells after 26 minutes **(1mk)**

c)Work out the rate of cell division between 24 and 28 minutes. **(2mks)**

d)After how long was the number of yeast cells 128? **(1mk)**

e)Name the phase of the curve labeled. **(2mks)**

i) A to B

ii) B to C

f) Give the reason for the shape of the graph between point C and D. **(3mks)**

g)State five factors that may cause human population growth pressure to assume the shape of the graph curve between B and C. (5mks)

SECTION B Answer only one question.

18. Describe how animal, wind and water seeds and fruits are adapted for dispersal. (20mks)

19. Explain the structures and environmental factors that affects the rate of transpiration in plant,(20mks)

20. A) State three adaptations of small intestines to its function .explain each. (6mks

b)Describe the digestion of carbohydrates from the mouth to ileum. (14mks)