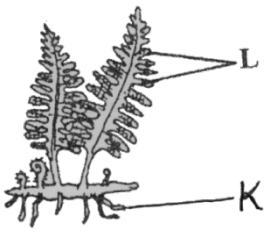
FORM THREE SYBALLUS BASED QUESTIONS

BOMET COUNTY JOINT EXAMINATIONS - 2015

1.a) What is metamorphosis?
(1mark)

b) What is the biological significance of metamorphosis to an insect?
(2marks)

2.a)The diagram below shows a certain plant.



(i) Name the division in the kingdom Plantae to which the plant belongs.
(1mark)

(ii) State the functions of structurelabelled K and L.
(2marks)

3. State three functions of an exoskeleton in members of the phylum Arthropoda.(3marks)

5. What is meant by the terms? (3marks)

a) Hypogenous flower

b) Gamesepalous.....

c) Dichagamy.....

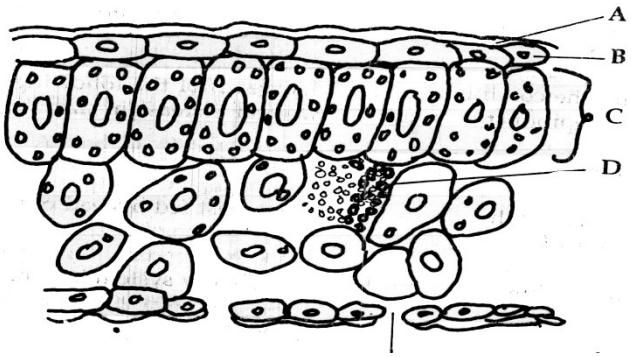
7. What is the main difference between the phloem tissues of subdivisions Gymnospermaphyta and Angiospermaphyta.
(1mark)

9.a) State two functions of aerenchyma tissue in hydrophytes.
(2marks)

b) State the difference between habitat and ecological niche.
(2marks)

18. State four differences between wind pollinated flower and insect pollinated flower. (
4marks)

26. The diagram below shows the internal structure of a leaf



(i) Name the part labelled B.
(1mark)

(ii) State the function of the part labelled**C**. (1mark)

(iii) State the difference between xerophytes and hydrophytic leaves.
(2marks)

Bondo 06

2. What is meant by the terms

(i) Hypogynous flower
(1mk) **BND**

(ii) Pistillate flower (1mk)
BND

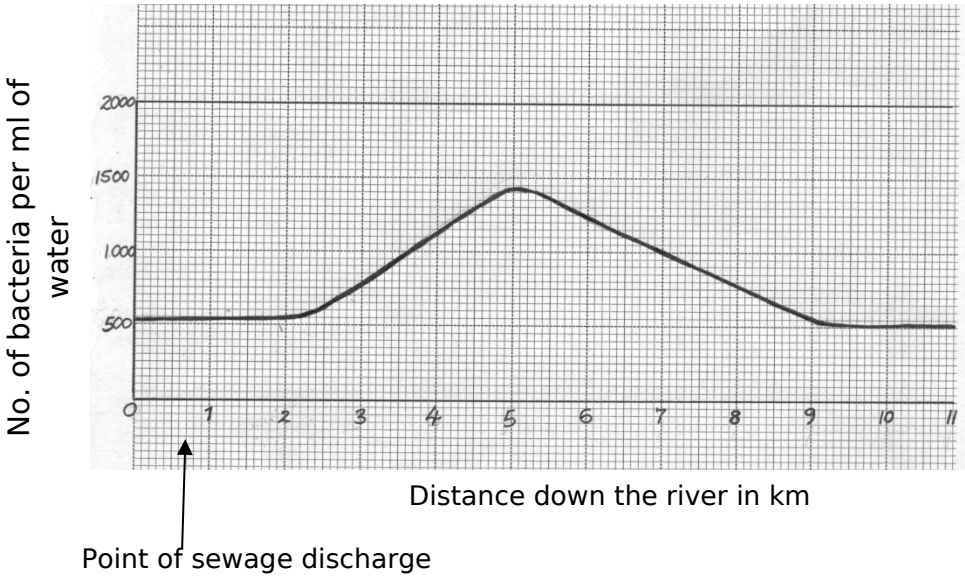
5. Suggest three measures that can be taken to control infection of man by protozoan parasites.
(3mks) **BND**

7. State the characteristics that can separate the following organisms into respective classes – millipedes, Tsetse fly and spider.
(3mks) **BND**

14. a) Name the tissue that is responsible for secondary thickening in plants
(1mk) **BND**

b) What is the role of water in a germinating seed? (2mks)
BND

18. The graph below shows the effects of sewage on the population of a species of bacteria in a certain river.



Account for the changes in population of bacteria between 2 and 10 Kilometres down the river.
(2mks)

20. Name the spore producing structures in

a) Bryophytes.
(1mk) **BND**

b) Pteridophytes (1mk)
BND

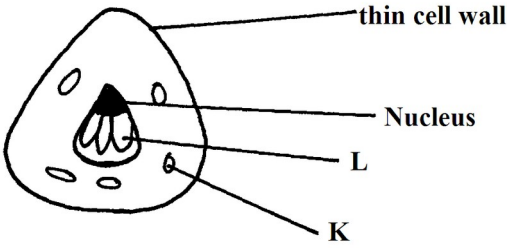
21. a) During which phase of meiosis does crossing over occur.
(1mk) **BND**

22. a) Account for the loss in dry weight of cotyledons in a germinating bean seed. (1mk)

b) State three effects of gibberellins on shoots of plants.
(3mks) **BND**

BONDO 015

5. The diagram below represents the structure of a yeast cell as seen under a light microscope.



(a) Name parts labeled K, L
(2mks)

6. (a) Which part of plant normally shows

(i) Increased growth at lower auxin concentration (1mk)

(ii) Decreased growth at lower auxin concentration
(1mk)

10. A wild beast in Masai MaraNational Park were found to be infested with a lot of ticks. State the trophic level occupied by the following organisms:

(a) (i) Wild beast (1mk)

(ii) Ticks (1mk)

(b) Sketch a pyramid of numbers to represent above feeding relationship.(1mk)

11. (a) Name the causative agent of the following diseases in humans.

(i) Bilhaziasis (1mk)

(ii) Syphilis (1mk)

18. During a biological trip, plants that had flowers drew the attention of students

(a) Name the subdivision of the plants
(1mk)

(b) Name two possible characteristics that students would use to conclude that they were insect pollinated.
(2mks)

26. Give two reasons why class insect is the most numerous among members of phylum arthropoda.
(2mks)

28. State two roles of a fruit to a plant (2mks)

29. What is the importance of the following in an ecosystem?

(i) Bacteria and fungi (1mk)

(ii) Predators (1mk)

BORABU 2009

4. State the role of the following elements to the growth and development of plants(3mks)

(i) Calcium

(ii) Magnesium

(iii) Nitrogen

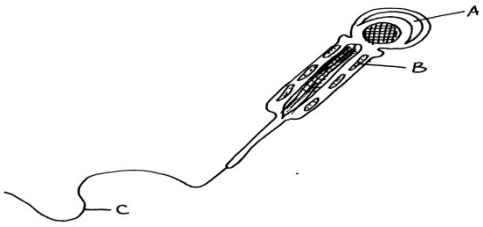
6. (a) What is the function of the following parts of the male reproductive system(3mks)

(i) Epididymis:-

(ii) Seminal vesicle:-

(iii) Interstitial cells:-

(b) The diagram bellow shows the structure of a sperm cell. Identify the parts labeled A, B and C and state their functions
(6mks)



15. What is parthenocarpy?
(1mk)

18. In an attempt to clear a certain weed from St. Thomas Moore fish pond, Riang'ombe Sec. School Biology students introduced a species of beetles into the pond.

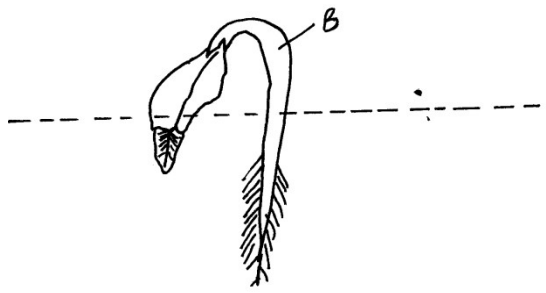
(a) Give the term used for this method of control
(1mk)

(b) State **two** advantages of this method over the use of herbicides (2mks)

19. (a) State the causative agent of cholera (1mk)

(b) What is the cause of dehydration in cholera victims (1mk)

21. The diagram below shows a germinating seedling



(a) Name the part of the seedling labeled B
(1mk)

(b) State the type of germination exhibited above
(1mk)

22. (a) Name **two** hormones that control metamorphosis in insects (2mks)

(b) Identify the plant hormone responsible for

(i) Callus tissue formation
(1mk)

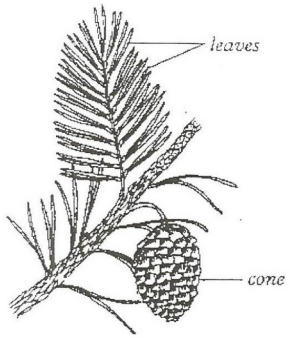
(ii) Formation of abscission layer
(1mk)

(iii) Fruit ripening
(1mk)

23. (a) Name **three** ways by which flowering plants eliminate waste products from their body
(3mks)

BUNYORE

14. The diagram below represents a certain plant species.



a) State the class to which the plant belongs. (1 mark)

b) State the difference between members of Gymnospermaphyta and Atngiospermaphyta (2 marks)

15. Give two reasons why a spider is classified under Phylum Arthropoda. (2 marks)

16. (a) Define the following terms as used in ecology. (2 marks)

i) Population

ii) Autecology

(b) From three students wanted to estimate the population of grasshoppers in $5km^2$ grass field near a school compound. They captured 36 grasshoppers and marked them before returning them back to the field. After two days they made another catch of grasshoppers. They collected 45 grasshoppers of which only 4 had marks.

i) State why the second capture was done after two days. (1 mark)

ii) From the data calculate the population size of grasshoppers in the grass field.

(2 marks)

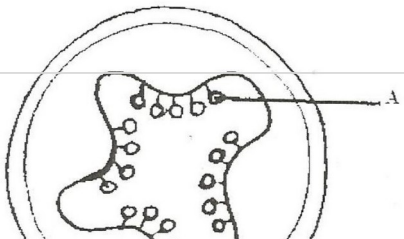
17. In mitosis in animals chromatids failed to separate and move to opposite poles

a) Name the organelle that the cell was lacking (1 mark)

b) Name two regions in plants where cells actively undergo mitosis

(2 marks)

18. The diagram below represents a transverse section of an ovary from a certain flower.



a) Name the structure labeled A. (1 mark)

b) Name the type of placentation illustrated in this diagram. (1 mark)

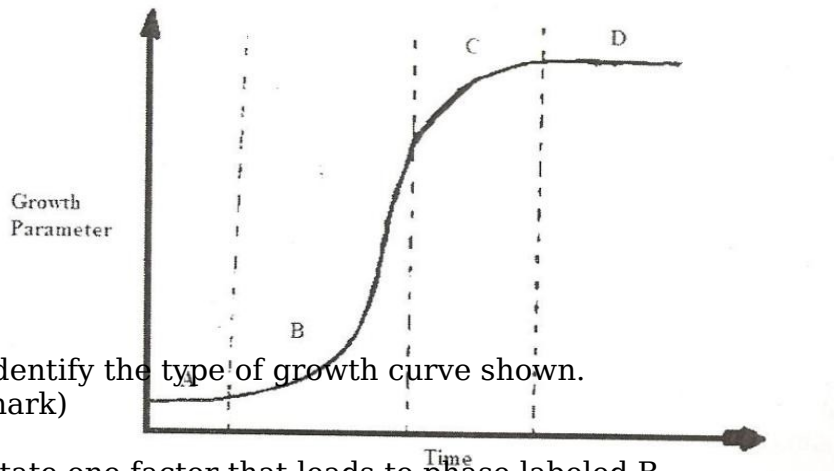
19. (a) State the functions of the following parts (2 marks)

i) Endometrium

ii) Epididymis

b) What mechanism facilitates the movement of the ovum towards the uterus? (1 ma)

20. Use the diagram below to answer questions that follow.



a) Identify the type of growth curve shown. (1 mark)

b) State one factor that leads to phase labeled B (1 mark)

21. Give two differences between epigeal and hypogeal germination (2 marks)

22. State the function of juvenile hormone in growth and development of insects.

(1 mark)

BUSIA

5. What are the effect of gibberellins on the shoot of plants?
(2 marks)

15. a) Name the tissue in the stem and leaves of hydrophytes that allows them to store air for gaseous exchange..
(1 mark)

b)State the function of pneumatophores. (1 mark)

32. a) What is polysepalous flower.
(1 mark)

b) How is a sugarcane flower adapted to wind pollination?
(2 marks)

BUTERE

2. During a field trip, astudent collected a specimen that had the following characteristics

- 2 body parts
- More than 4 pairs of limbs
-had a carapace

(a) Identify the class into which the organism belongs.
(1mk)

(b) Other than the head, name the other body part.
(1mk)

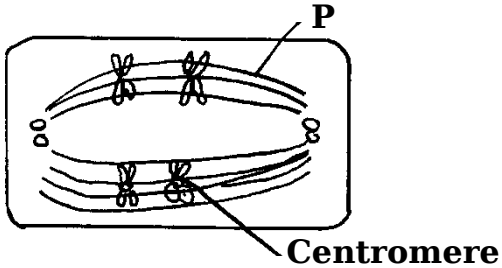
24. Distinguish between **population** and **community**.
(2mks)

25. State **two** adaptations of submerged aquatic plants to gaseous exchange.
(2mks)

26. (a) Give **two** sources of water pollution. (2mks)

b) Explain the effect of discharging hot water in an aquatic ecosystem.
(2mks)

27. The diagram below represents a stage during cell division.



a) Identify the stage of cell division.

(1mk)

b) Give **two** reasons for your answer (2mks)

c) Name the structure labelled **P** (1mk)

28. State **three** advantages of asexual reproduction. (3mks)

29. Name the antigens that determine human blood groups. (2mks)

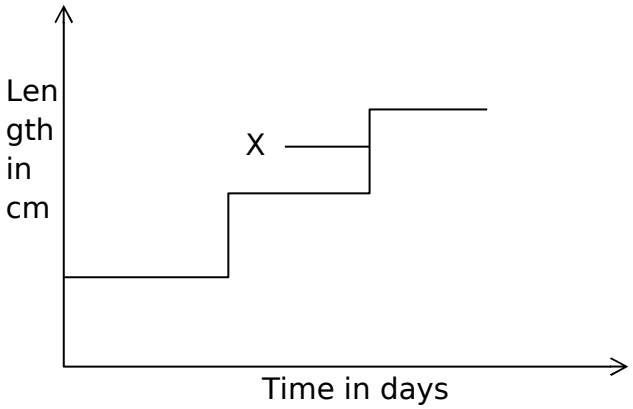
COMA JOINT

1. Name the causative agent of cholera. (1 mark)

7. (a) Differentiate between hypogeal germination and epigeal germination. (2 marks)

(b) State **two** causes of dormancy in seed. (2 marks)

16. Study the graph **below** and answer the questions that follow.



(a) What is the name given to the type of graph? (1 mark)

(b) What is the name used to describe point **X**. (1 mark)

(c) State the importance of part **X**. (1 mark)

(d) Name the phylum in which the graph represented in above occurs. (1 mark)

CROSS COUNTRY

11. Study the food chain below and answer the questions that follow

Green plants ⟶ Insects ⟶ Lizards ⟶ Eagles

Snakes

a)Name the trophic level occupied by the

- Green plants
  (1mark)
- Eagles
  (1mark)

b)Explain why energy from green plants to insects is more than that from lizards to snakes (2marks)

12. a) With a reason name the structure responsible for intermittent growth in an insect

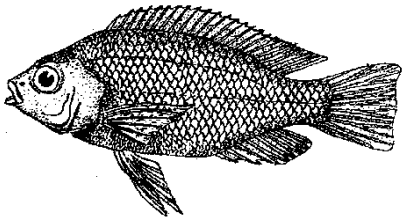
Structure .....(2mark)

b) What is the hormone responsible for growth in an insect
(1mark)

13. a) What is reversed stomatal rhythm in xerophytes
(1mark)

b) How can this phenomenon in (a) above be a limitation to the plant in terms of gaseous exchange
(1mark)

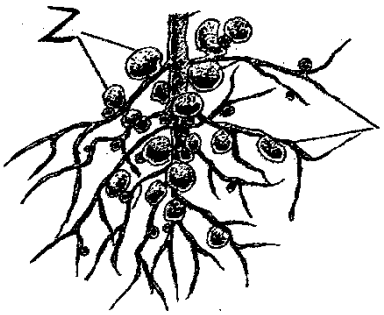
17. Below is a diagram of an organism



i) State the class which the organism belongs to (1 mark)

ii) State two observable characteristics used to classify the organism in the class you have mentioned in (i) above
(2 marks)

23. A leguminous plant uprooted showed some feature on its roots as shown below



i) State the identity of Z
(1 mark)

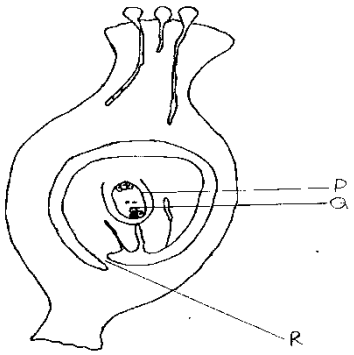
ii) Name the bacteria in Z
(1 mark)

iii) Name the relationship between the named bacteria and the root at Z (1 mark)

iv) What mineral element is availed by the bacteria in Z to the plant
(1 mark)

v) Name one organism that reduces the element named in (iv) above reducing its availability to plants
(1mark)

24. Study the reproductive structure below



a) Name the parts labeled P and Q
(2marks)

b) State the function of the part labeled R
(1mark)

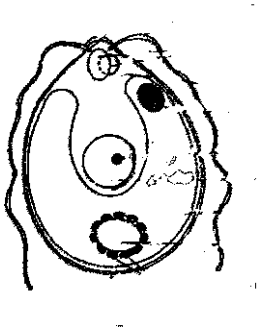
c) How do the following factors hinder self pollination in plants

i) Protandry
(1mark)

ii) Self sterility
(1mark)

25. State two functions of the enzyme thrombokinase in blood clotting process (2marks)

26. Below is a diagram of an organism



a) What is the identity of the organism
(1mark)

b) Into which kingdom does the organism belong
(1mark)

c) Other than the locomotive structure shown by the above organism name two other locomotive structures used by other members of the above named kingdom (2marks)

EKSIKA 2014

9 Give a reason why primary productivity in an aquatic Ecosystem decreases with depth.
(1mk)

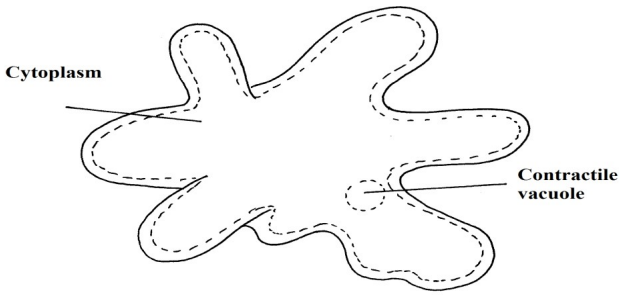
12 Name the regions in plants where the following take place.
(2mks)

i) Primary growth

ii) Secondary growth.

13 State **THREE** reasons for classifying organisms.
(3mks)

14 A student observing a drop of water under the high power objective lens of a microscope observed an organism and drew the following organism.



a) Suggest the kingdom to which the organism belongs.
(1mk)

b) Identify the organism.
(1mk)

c) Give an example of a disease caused by the organism.
(1mk)

19 Distinguish between parthenogenesis and parthenocarpy.
(2mks)

26 State the role of decomposers in an ecosystem.
(1mk)

27 State **THREE** advantages of asexual reproduction in organisms.
(3mks)

28 Define the following terms as used in Ecology.
(4mks)

i) Biosphere.

ii) Population.

iii) Standing crop.

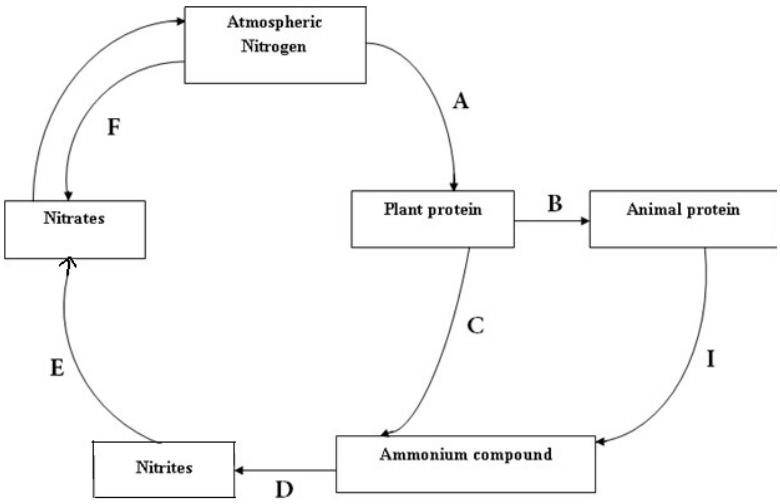
iv) Carrying capacity.

32 What is the significance of meiosis.

(2mks)

EKSIKA 2015

7 i) The diagram below represents a simplified Nitrogen cycle



that Name the organisms cause the following process

(3mks)A,D,E

ii) Name the process presented in I above

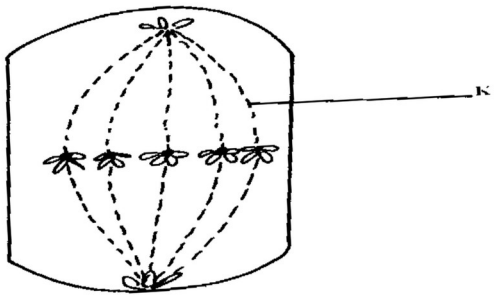
8 Differentiate between food web and food chain.

(2mks)

23 Differentiate between primary growth and secondary growth

(2mks)

24 The diagram below represent a given stage of cell division



a) Identify the stage of the cell division..... (1mk)

b) Give two reasons for your answer.....
(2mks)

c) Name the structure K.....(1mk)

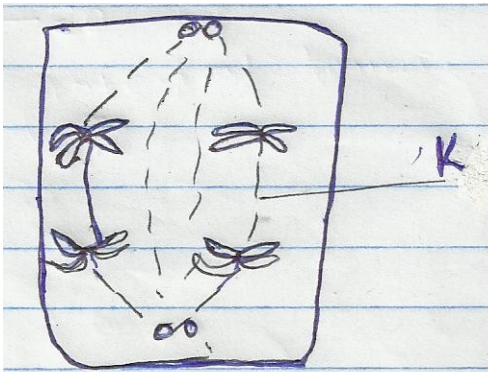
27 The diagram below represent transverse section of an ovary of a certain flower



i) Identify the type of placentation illustrated in the diagram above (1mk)

GATUNDU

4. The diagram below represents a stage during cell division.



i) Identify the stage of cell division. (1 mark)
ii) Give two reasons for your answer (a) above. (2 marks)
iii) Name the structures labeled K. (1 mark)

5. State three roles of Gibberellins hormone in plant. (3 marks)
6. Explain how drooping of leaves on a hot sunny day is advantageous to a plant. (1 marks)

13 i) Distinguish between a community and a population (2 marks)
ii) State two measures that can be taken to control infection of man by protozoan parasites. (2 marks)

14. i) Pregnancy continues if the ovary of an expectant mother is removed after 4 months. Explain. (2 marks)
ii) What is the role of testes in the mammalian reproductive system? (2 marks)

27. State three features that a grasshopper, a crab, a spider and a millipede have in common. (3 mark)
28. State two characteristics of Eukaryotes. (2 marks)

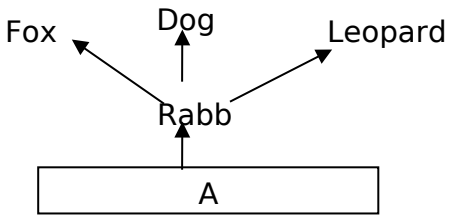
HOMA-BAY SUB-COUNTY JOINT EVALUATION EXAM

5. (a) What is fertilization ? (2mks)

(b) Explain how double fertilization takes place in plants (2mks)

7. State two importance of sexual reproduction
(2mks)

8. The diagram below show part of a food relationship in an ecosystem



(a) Name the food relationship shown in the diagram
(1mk)

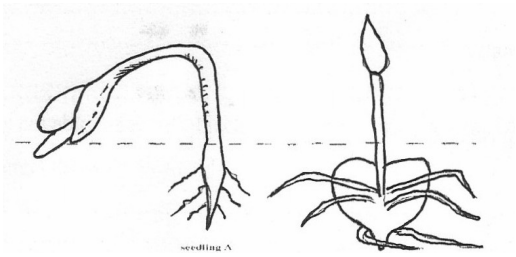
(b) Name the trophic level occupied by organism **A**
(1mk)

(c) What is the main source of energy in the ecosystem shown in the diagram above?(1mk)

14. State **three** distinguishing features for members of *pylum chordate*
(3mks)

25. State **three** advantages of asexual reproduction in organisms
(3mks)

27. The diagram below represents a stage of growth in two different seeds



Seedling A **Seedling B**

(a)Identify the type of germination exhibited by seedlings A and B
(2mks)

(f) State the role of oxygen in germination
(1mk)

29. Define the following terms used in ecology
(4mks)

(i) Biosphere……

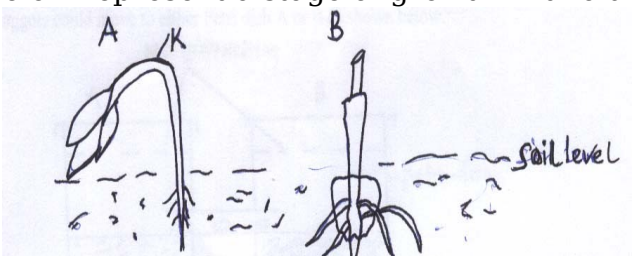
(ii) Population ……

(iii) Synecology……

(iv) Carrying capacity

JISET

11. The diagrams below represent a stage of growth in two different seeds.



(a) **Identify** the type of germination exhibited by seedlings A and B and give a reason for each identity
(b) **State** the function of the part labeled K.
(1mk)

12. Explain how the following adaptations reduce transpiration in xerophytes
(a) Sunken stomata (2mks)
(b) Thick waxy cuticle (1mk)

15. Name the mechanisms that hinder self —fertilization in flowering plants.
(3mks)

17. **State** the importance of placenta and amniotic fluid during pregnancy.
Placenta
(2mks)
Amniotic fluid
(1mk)

19. Name the meristematic tissues responsible for:
(a) Primary growth
(1mk)
(b) Secondary growth in plants
(1mk)

27. Distinguish between habitat and ecological nitche.

KAKAMEGA

9. Other than having many features in common, state the other characteristics of a species. (lmk)

10. Why are green plants referred to as primary producers in an ecosystem?
(2mks)

14. What is the significance of meiosis?
(2mks)

15. a) State **three** advantages of cross — pollination.
(3mks)

b) State **two** ways by which plants avoid self— pollination.
(2mks)

16. The following organisms were found in a certain habitat:

Water snail, Protozoa, Kingfisher, Mosquito larvae, Phytoplankton, Fish and Water weeds.

In the table below place the organisms in their respective trophic levels.
(3mks)

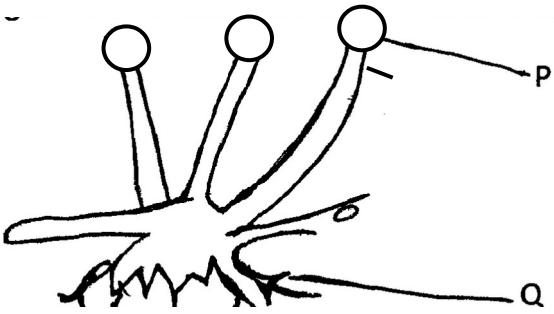
TROPHIC LEVEL	**ORGANISMS**
Producers	
Primary producers	
Secondary producers	

22. a) State **two** environmental conditions that can cause seed dormancy.
(2mks)

b) Distinguish between epigeal and hypogeal type of germination.
(2mks)

25. State **three** disadvantages of sexual reproduction
(3mks)

27. The diagram below illustrates the structure of bread mould



a) Name the part labeled P

b) b) State the functions of the structure labeled Q
(3mks)

KANGUNDO

9. Explain how the following adaptations of xerophytes assist them to survive in their habitat

(a) Sunken stomata
(1mk)

(b) Thick waxy cuticle
(1mk)

10. (a) State two features in the insect pollinated flowers that encourage cross pollination(2mks)

(b) Explain how dispersal of seeds and fruits by plants are of economic importance to the species.
(2mks)

13. State three characteristics of the pteridophyta
(3mks)

15. (a) Give the difference between primary growth and secondary growth
(1mk)

(b) (i) What is intermittent growth
(1mk)

(ii) Give one phylum in the kingdom Animalia where its members exhibit intermittent growth
(1mk)

16. To estimate the population size of fish in a certain pond; traps were laid at random and 600 fish were caught, marked and released back into the pond. Three days later, traps were laid again and 240 fish were caught. Out of the 240 fish, 80 were found to have been marked,

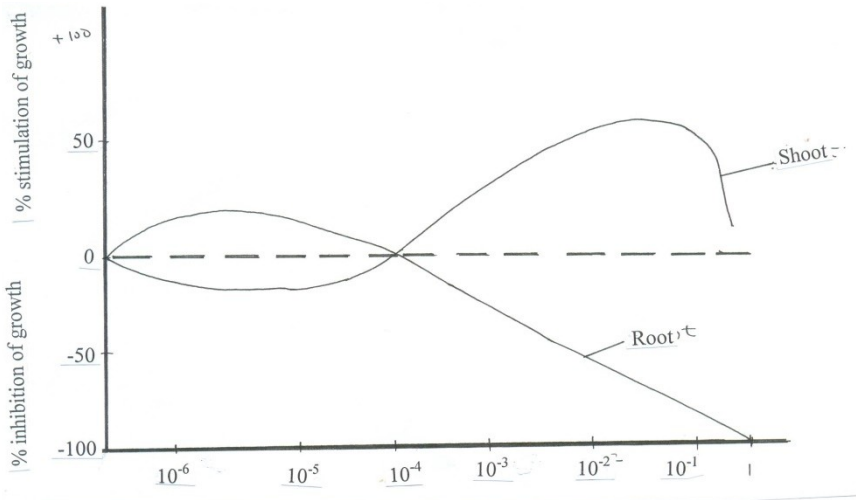
(a) Calculate the population size of the fish in the pond
(2mks)

(b) What is the name given to this method of estimating the population size. (1mk)

17. Explain why the removal of a placenta from the walls of the uterus before birth would result in the death of the foetus.
(2mks)

18. Study the diagram below which shows the effect of auxin concentration on the rate of growth

in a plant



KANGUNDO DISTRICT F.4 MULTILATERAL EXAM 2014 BIOLOGY P.1

7

(a) Which part of the plant shows increased growth at lower auxin concentration (1mk)

(b) State the relationship between auxin concentration and the rate of growth in

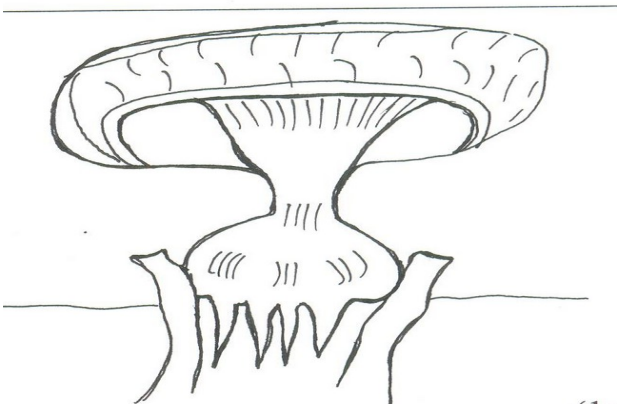
(i) Shoot (1mk)

(ii) Root (1mk)

19. Explain why decomposers are never included in a food chain (1mk)

KATHONZWENI

4. The following diagram represents a plant



(a) To which division does the above plant belong?
(1mk)

(b) Give a reason for your answer in (a) above.
(1mk)

(c) State one economic importance of the plant above.
(1mk)

5. The following is a food chain that was presented by a pupil in a class

Grasshopper → lizards → chicken → hawk

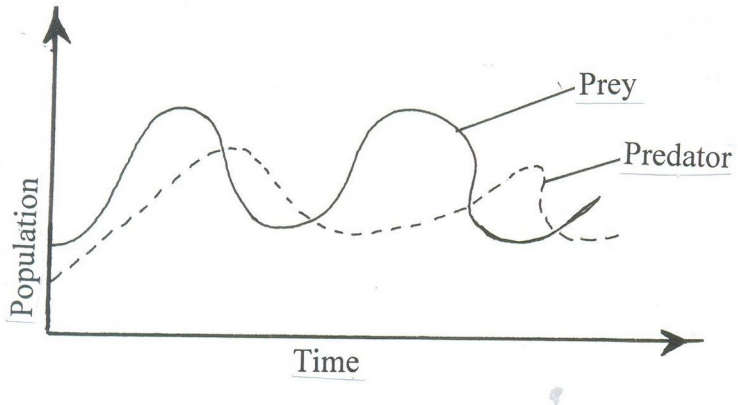
State errors that are in the food chain.
(2mks)

6. After four months of pregnancy, the ovaries of a woman can be removed without terminating pregnancy. However during the first four months of pregnancy the ovaries must remain intact if pregnancy is to be maintained. Explain these observations. (2mks)

7. What is the significance of chiasma formation during meotic cell division?
(1mk)

9. Mention two differences between pollen grains of wind and insect pollinated flowers(2mks)

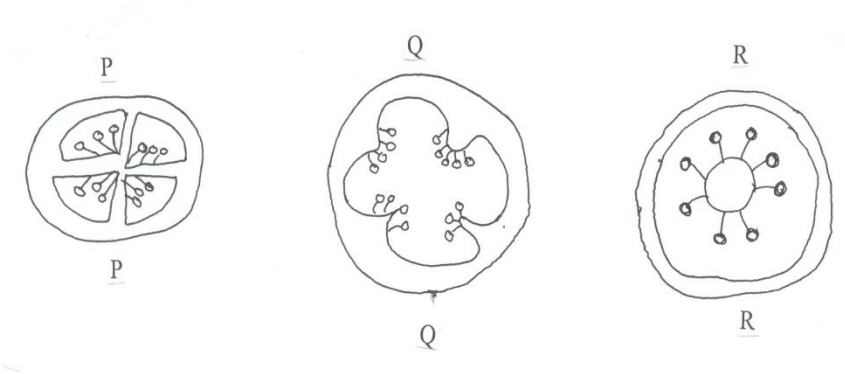
10. (a) Distinguish between predator and prey?
(2mk)



(b) The figure above shows predator/prey relationship. Study the figure and answer the questions that follow

Describe the relationship between the predator and prey.
(2mks)

15. Below are cross sectional diagrams of fruits



Identify the type of the placentation present in the three diagrams.
(3mks)

KEIYO DISTRICT

2. Name the locomotory structure of most members of Monera kingdom.
1mk*Kyo*

14. (a) Define the terms

(i) Population.
1mk*Kyo*

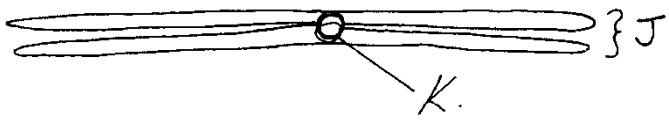
(ii) Biomass
1mk*Kyo*

(b) Why do herbivores have large eyes on the side of their heads?
1mk*Kyo*

15. (i) State the function of cervix in female mammals.
1mk*Kyo*

(ii) List any two preventive measures you would take to control hepatitis B.
2mks*Kyo*

21. The figure below shows the structure of a chromosome. Identify the parts labeled K and J.
1mk*Kyo*



K

22. (i) State the role of decomposers in an ecosystem.
1mk*Kyo*

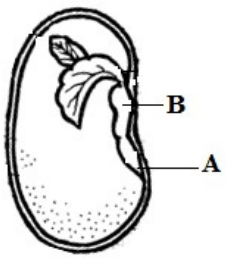
(ii) Give any four symptoms of amoebiasis.
2mks*Kyo*

27. (a) What are the benefits of mitosis.
2mks*Kyo*

b) State any two advantages of seed dormancy in the life of a plant.
2mks*Kyo*

KHWISERO SUB-COUNTY JOINT EVALUATION EXAM - 2015

4. The diagram below shows the internal structure of a broad bean seed. Study it and answer the questions that follow.



(a) Name the part labeled **B**. (1 mk)

(b) Why is it important that the part labeled **A** develops first during germination? (2 mks)

8. A certain animal had one cell from its alimentary canal observed under light microscope. A total of 40 chromosomes were seen.

(a) State the number of chromosomes in

(i) The spermatozoa of this animal (1 mk)

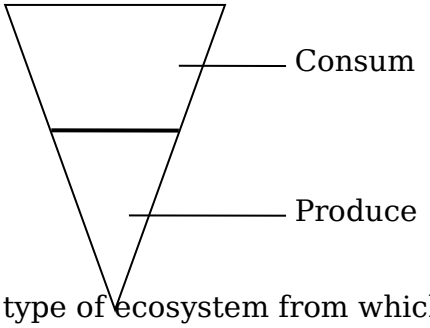
(ii) One of cells in the tongue.
(1mk)

9. How do identical twins and fraternal twins arise?

i)Identical twins (2 mks)

ii) Fraternal twins. (2 mks)

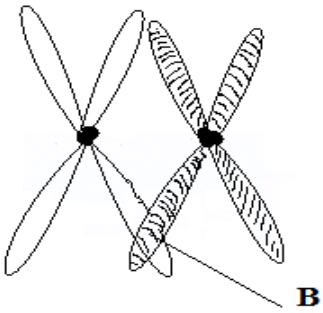
14. The diagram below represents a pyramid of biomass derived from a certain ecosystem.



(a) Suggest the type of ecosystem from which the pyramid was derived (1 mk)

(b) State the significance of short food chains in an ecosystem. (1 mk)

15. The diagram below shows a phenomenon which occurs during cell division.



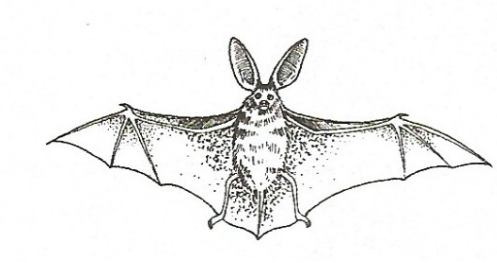
a) Identify the stag ch this phenomenon occurs. (1 mk)

b) State the importance of the phenomenon taking place in the part labeled **B**.(2mrks)

18. i)Name the hormone which is released by the pituitary gland in high concentration on the 14th day of the menstrual cycle (1mk)

ii) State **two** functions of the hormone named in 18)(i) above (2mks)

27. The diagram below represents a certain organism.



State the phylum and class to which it belongs. *(*2mks*)*

Phylum ……

Class ……

29. State **three** biotic factors that affect distribution of living organisms in an ecosystem(3

KIBWEZI

5. (a) Explain how the following prevent self-pollination.

(i) Protandry (1mk)

(ii) Self sterility
(1mk)

(b) What is the physiological significance of having testes outside the body of a human male

16. (a) During an ecological study a student came across an animal with the following characteristics:

4 pairs of walking legs,2 body parts, Simple eyes

Name the :

(i) Phylum _____
(1mk)

(ii) Class _____ (1mk)

(b) Name the division of kingdom plantae with the following spore producing bodies

(i) Sori _____ (1mk)

(ii) Sporangium _____
(1mk)

18. (a) Differentiate between the apical meristem and the cambium
(2mks)

(b) State the role of the following in germination:

(i) Hypocotyl in epigeal germination
(1mk)

(ii) Coleoptile in hypogeal germination
(1mk)

24. (a) What is the role of the following bacteria in the nitrogen cycle

(i) Denitrifying bacteria
(1mk)

(ii) Nitrifying bacteria
(1mk)

(b) Give two reasons as to why biological control is preferred to chemical control in the

Control of pests and parasites.
(2mks)

KILUNGU

5. Give three reasons why mitosis is important in living organisms
(3mks)

6. Give the characteristics which adapt flowers for wind pollination
(4mks)

11. Name the agent that causes:-

(a) Cholera (1mk)

(b) Typhoid fever (1mk)

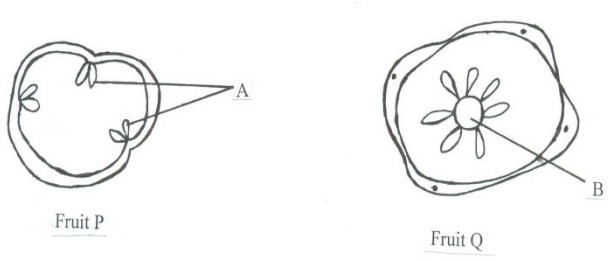
(c) Amoebic dysentery
(1mk)

13. State three ways in which nitrogen in the air is made available for plant use (3mks)

15. (a) Name the hard body covering found in organisms in Arthropoda
(1mk)

(b) State three uses of the structure mentioned in (a) above
(3mks)

19. Below are cross sections of two fruits. Study them and answer the questions that follow



(a) Name the parts labelled A,B

(b) Name the type of placentation in fruit P,Q

(2mks)

23. State two organelles absent in members of kingdom monera but present in members of

kingdom protoctista
(2mks)

28. State one significance of interphase in cell division
(1mk)

KIPKELION

7. Draw a possible food chain for the crocodile , fish algae and mosquito larvae found in an aquatic ecosystem
(2mks)

11. State **three** differences between members of division Bryophyta and Pteridophyta.(3mks)

(a) Identify the type of variation illustrated by the curve.
(1mk)

(b) State one cause of the variation you have named in (a) above.
(1mk)

17. State two classes of the phylum chordate where all members are endothermic.(2mks)

18. Give three adaptations of animals dispersed fruits and seeds.
(3mks)

26. (a) Name an organ in which meosisi occurs in :
(1mk)

(i) A flowering plant

(ii) A mammal. (1mk)

(b) (i) Name the stage of meosis during which crossing over takes place(1mk)

(ii) What is the importance of crossing over in living organism. (1mk)

KISII SOUTH

15. In an attempt to estimate the number of weaver birds in a small woodland 435 were captured , marked and released. Three days later , 620 were captured 75 of which were marked.

a) What is the name of the sampling method described above.
(1mk)

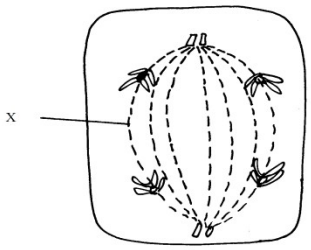
b) Calculate the approximate size of the weaver bird population in the woodland. (2mks)

c) Give one disadvantage of this method. (1mk)

16. Give an example of ball and socket joint.
(1mk)

17. Name two types of strengthening tissues in plants.
(2mks)

27. The diagram below represents a stage during cell division.



i) Identify the stage of cell division.
(1mk)

ii) Give two reasons for your answer (a)i) above
(2mks)

iii) Name the structure labelled M. (1mk)

28. Bivalent synapsis, crossing over are terminologies used in cell division.

a) Name the stage of meiosis in which the process takes place.
(1mk)

b) Distinguish between synapsis and crossing over.
(2mks)

MACHAKOS COUNTY

2. State TWO characteristics of kingdom Monera that are not found in other kingdoms. (2marks).
3. Two species in an ecosystem cannot occupy the same niche. Explain.
(1 mark)
4. State the significance of metamorphosis to the life of insects.
(2 marks)
7. The scientific names of three animals leopard, wolf and lion in the family carnivora are; Panthera pardus, Canis lupas and Panthera leo respectively.

a) Why are scientific names given in Latin?

(1 mark)

b) What does *Canis* refer to?

(1 mark)

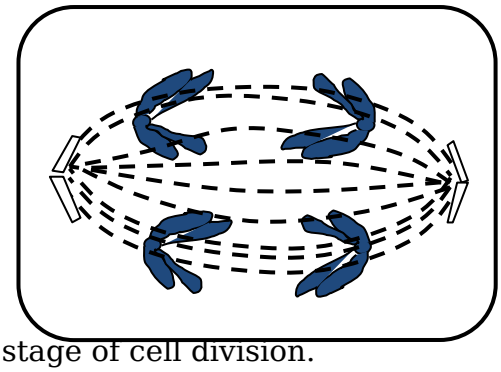
c) Giving a reason, state the organisms that are MOST closely related.

(1 mark)

10. The ovaries of an expectant woman can be removed after the first four months of pregnancy without terminating the pregnancy. Explain.

(2 marks)

11. The diagram below represents a stage during cell division.



a) Name the stage of cell division.

(1 mark)

b) Give two reasons for your answer in a) above.

(2 marks)

c) State the significance of this stage of cell division in living organisms.

(1 mark)

12.) Name the causative agent for the following diseases;

a) Typhoid

(1 mark)

b) Syphilis (1 mark)

29. What is the importance of the pollen tube in fertilization in plants?

(1 marks)

MAKINDU DISTRICT INTER

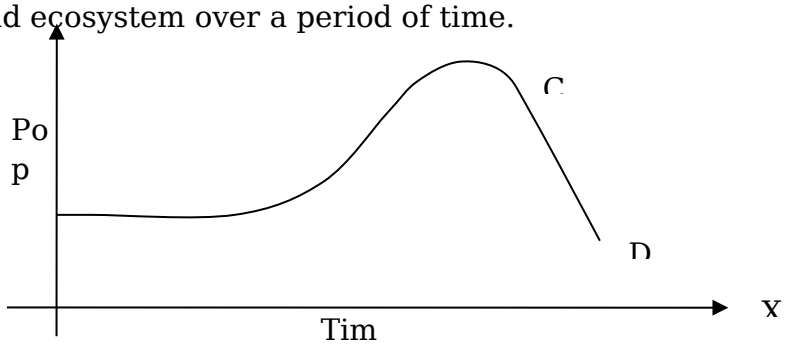
18. State two ways in which some fungi are beneficial to humans.

(2marks)

19. A millipede, grasshopper and crayfish all belong to Phylum Athropoda. Mention three major characteristics that they have in common.

(3marks)

20. The graph below represents a population growth of a certain herbivores in a grassland ecosystem over a period of time.



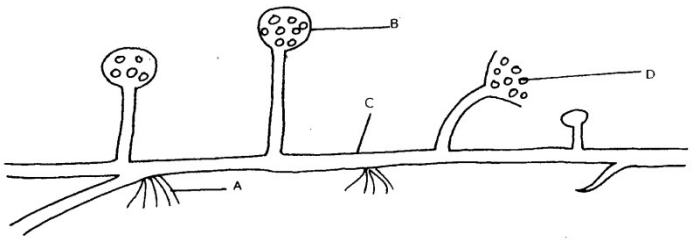
Suggest two factors that could have caused the population change between C and D.

22. State two physiological processes that are brought about by the application of gibberellic acid on plants. (2marks)

24. Name the hormone responsible for apical Dominance (1mark)

MANGA SUB-COUNTY

5. The figure below shows part of a mould growing on a cubstrate



25.
26.
27.
28.
29.
30.

a) Name the kingdom to which it belong (1mark)

b) Name the parts labeled B, C, and D (3 mark)

7 A certain plant was found to have the following characteristics: parallel venation, sheath like petiole and flower parts in multiples of three.

a) Name the class to which the plant belongs.
(1mark)

b) Suggest the expected arrangement of the vascular bundles in its stem, (1mark)

8 Estimate the population size of crabs in a certain lagoon, traps were laid at random. 300 crabs were caught. marked and released back into the lagoon.

Four days later traps were laid again and 274 crabs were caught. Out of the 274 crabs, 80 were found to have been marked.

a) Using the information given above, calculate the approximate population size of crabs in the lagoon.

(2marks)

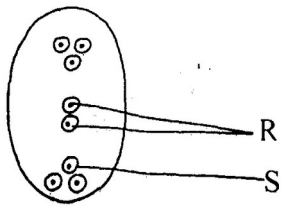
b) What is the name given to this method of estimating the population size.

(1mark)

13 Explain why miscarriage would occur it the ovaries of a pregnant mother are removed before a period of four months but no miscarriage when ovaries are removed after four months of pregnancy.

(2marks)

25 Study the diagram of the embryo sac below and answer questions that follow.



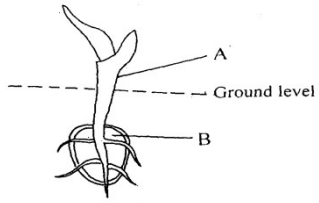
(a) Name the type of fertilization that occurs in the embryo sac

(1mk)

b) What do the structures labeled R and S develop after fertilization

(2mks)

26 The diagram below represents a maize seedling



(a) (i) Name the type of germination exhibited by maize.

(lmk)

(ii) Give a reason for your answer in (a) (I) above.

(1mk)

(b) State the functions of the parts labelled A and B

(2mk)

(MARAGUA)

3. State the role of epididymis (1 mark)

6. What is the relationship between leguminous plants and bacteria found in their root nodules

(1 mark)

10. State three features in bisexual flower that hinder self-fertilization

(2 marks)

18. (a) state three main characteristics of organisms in kingdom monera. (3 marks)

(b) Name the class in phylum arthropoda which has the largest number of individuals.

(1 mark)

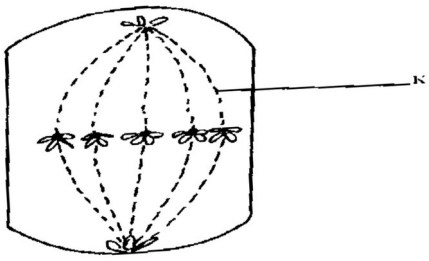
20. (a) what do the abbreviation HIV stand for?

(1 mark)

(b) Give three ways in which HIV/AIDS may be transmitted. (3 marks)

24. List three functions of gibberellins in plants (3 marks)

29. The diagram below shows a cell undergoing a stage in cell division



(a) With a reason, identify this stage. (2 marks)

(b) During which phase of meiosis does crossing over occur? (1 mark)

31. (a)Distinguish between epigeal and hypogeal germination (2 marks)

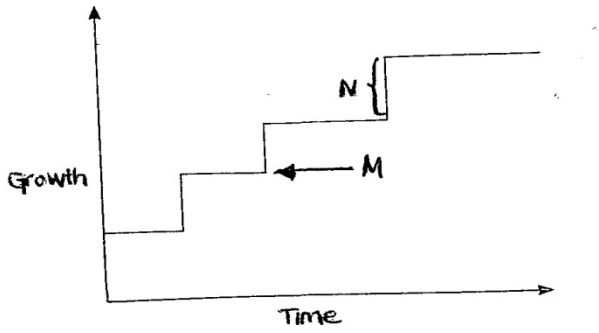
(b)Why is oxygen necessary in germination of seeds?

(1 mark)

MARAKWET WEST DISTRICT

4 Name the phylum whose member's possess notochord.
1mk

12 The graph below shows the growth pattern in a grasshopper.



a) Name the region labelled 2mks

b) Briefly explain the shape of the graph. 2mks

c) Give one advantage of metamorphosis in insects.
2mks

13 a) What is parthenocarpy. (1mk)

b) Which hormone can be used to induce parthenocarpy in unpollinated flowers.
(1mk)

c) What is the significance of slippery seeds in a tomato during dispersal? (1mk)

d) Why is a maize grain considered as a fruit?
(1mk)

14 a) Define the following terms in human reproduction.
2mks

(i) Parturition……

(ii) Implantation……

b) Name the hormone involved in the development of a female secondary sexual
characteristic.
(1mk)s

c) Give **one** function of amniotic fluid during pregnancy.
(1mk)

17 Explain why division Pteridophyta is considered more advanced than division Bryophyta.

(3mks)

28 (a) What is meant by the following terms:

(i) Ecological niche (lmk)

(ii) Community (lmk)

b) What is the importance of the following in an ecosystem?

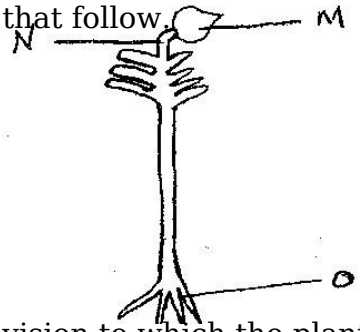
(i) Bacteria and fungi

(lmk)

(ii) Predators (lmk)

MARANDA

8. The figure below represents a certain type of plant – study it carefully and answer questions that follow.



(a) State the division to which the plant belongs

(b) Name the parts labeled M,N,O

(c) State three economic importance of organism that belong to the Kingdom Fungi

(d) What is a prokaryotic cell?

15. Distinguish between ecosystem and community as used in Ecology.

16. In a certain ecological study, students wanted to estimate the population of crabs in a pond .

They captured 6000 crabs on day one and marked them. They captured 500 crabs on the second day out of which 300 had the mark

(i) Estimates the population of crabs in the pond

(ii) Give two assumptions made during this study

20. Name two sources of progesterone hormone in the human body

21. State three mechanisms that hinder self pollination in flowering plants

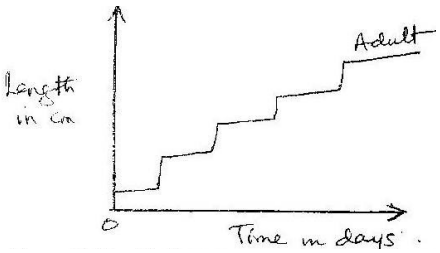
22. Name a hormone responsible for development of fruits in plants

23. State two advantages of sexual reproduction

24. (i) Explain how the fallopian tube is adapted to perform its functions

(ii) Name the causative agent of AIDS

25. The diagram below shows a growth curve



26. (i) Identify the type of growth curve above

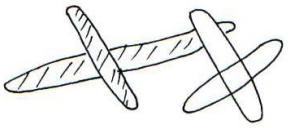
(ii) Name the phylum that exhibits this kind of growth curve

27. (ii) Identify three functions of water in seed germination

MBOONI EAST SUB - COUNTY

3. Most terrestrial plants do not grow well in water logged soils. Give a reason for this (1mark)

4. The diagrams below show a pair of homologous chromosomes. Study them and answer the questions that follow.

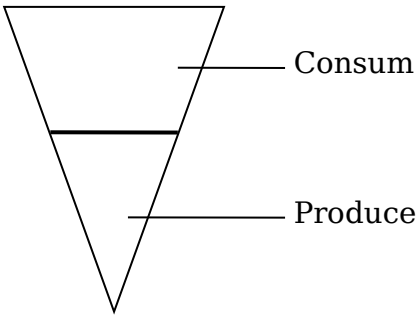


i) State the phenomenon shown above
(1mark)

(ii) What is the genetic significance of the phenomenon above?
(2 marks)

7. A small boy remarked that his dog looks larger on cold days than on hot days. Give a biological explanation for this.
(2 marks)

9. The diagram below represents a pyramid of biomass derived from a certain ecosystem.



(c) Suggest the type of ecosystem from which the pyramid was derived
(1 mark)

(d) State the significance of short food chains in an ecosystem.
(1 mark)

14. (a) What are meristems?
(1mark)

(b (i) what is the role of cork – cambium in secondary growth?
(1mark)

ii) Name the meristem that is responsible for increase in length of stems
(1mark)

18. Name the causative organism of the following diseases.

(i) Malaria (1mark)

(ii) Bilharzia (1mark)

24. State the characteristics that distinguish the following organisms into their respective classes (3

Millipedes, spider and tsetse fly.

25. How do identical twins and fraternal twins arise?

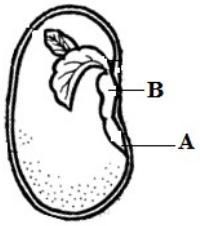
(i) Identical twins (2 marks)

(ii) Fraternal twins. (2 marks)

MBOONI WEST SUB - COUNTY

2. Distinguish between ecological niche and habitat.
(2mark)

7. The diagram below shows the internal structure of a broad bean seed. Study it and answer the questions that follow.



(c) Name the part labeled B. (1 mark)

(d) Why is it important that the part labeled A develops first during germination? (2 mark)

8. Explain what causes global warming. (3 marks)

17. State three advantages of asexual reproduction in plants.
(3 marks)

18. a).Name the causal organism for amoebic dysentery.
(1 mark

b) State three preventive measures of schistosomiasis in human beings
(3 mark)

21. a) state the most suitable biological tool for collecting the following organisms:-

i) A moth from a coffee farm. (1 mark)

ii) Ants from a tree trunk. (1 mark)

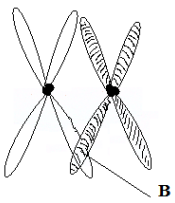
b) State two distinguishing characteristics of the kingdom protoctista.
(2 mark)

22. a) Name the hormone that stimulate the maturation of the graafian follicles to release a mature ovum in female reproductive cycle.
(1mark)

b) Explain why menstruation does not take place after fertilization in human beings. (2marks)

23. How does sunken stomata help in lowering transpiration?
(3marks)

24. The diagram below shows a phenomenon which occurs during cell division.



a) Identify the stage of cell division in which this phenomenon occurs.
(1 mark)

b) State the importance of the phenomenon taking place in the part labeled B. (2 marks)

27. a) Name a growth hormone that has inhibitory effects in plants growth. (1mark)

b) State two characteristics of a meristematic cells. (2marks)

28. Write down two functions of exoskeleton in the phylum Arthropoda. (2 marks)

MIGORI SUB-COUNTY JOINT EVALUATION EXAM

6. A certain animal had one cell from its alimentary canal observed under light microscope. A total of 40 chromosomes were seen.

(a) State the number of chromosomes in

(i) The spermatozoon of this animal (1 mk)

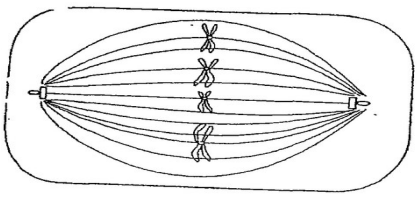
(ii) One of cells in the tongue. (1mk)

(b) Name a structure in mature plant where meosis takes place. (1mk)

9. State **two** advantages of metamorphosis to the life cycle of insects. (2mks)

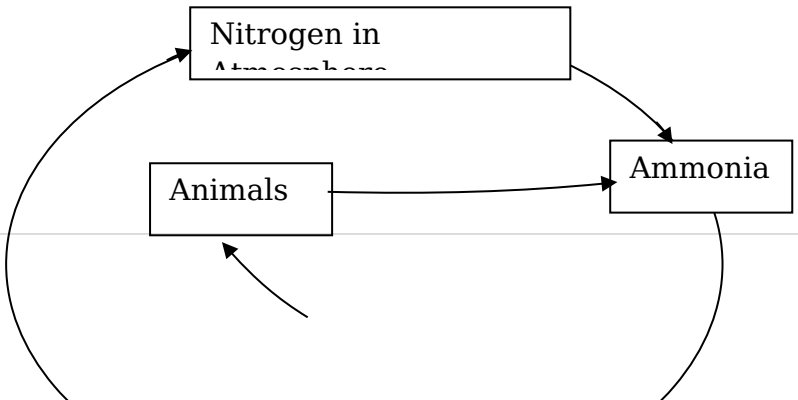
13. Give **three** functions of cystokinin hormone in plant (3mks)

15. The diagram below represents a stage in cell division.\

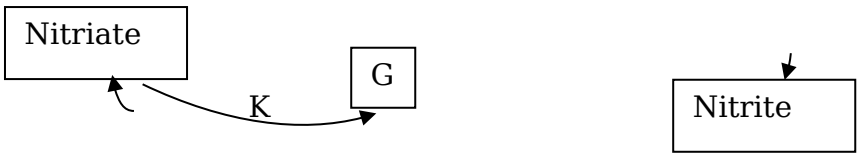


20. Explain double fertilization as used in flowering plants. (2mks)

21. The diagram below shows a simplified nitrogen cycle.



H



(a) Name the process represented by P,K,H

(b) Name the organisms involved in process J

(1mk)

(c) Name organisms represented by G

(1mk)

(a) Identify the stage of cell division

(1mk)

(b) Give a reason for your answer

(1mk)