NAME --------------------------------------------------- CLASS --------------------------- ADM NO --------------

GATITU MIXED SECONDARY SCHOOL

BIOLOGY 231/2

FORM 3

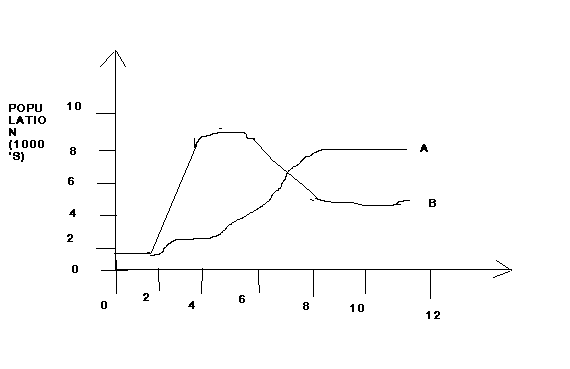
3RD TERM 2013.

2 HRS

SECTION A (40MKS)

ANSWER ALL THE QUESTIONS IN SPACES PROVIDED

1. The diagram below shows a section through a leaf.
2. Identify the cells A and E 1mk
3. Name the main substance whose movement is indicated by arrows X and Y. 1mk
4. Name two types of cells that constitute tissue B. 1mk
5. Describe how the tissue C is adapted to its functions. 3mks
6. Explain the effect of a rise in temperature on the movement of substance indicated by arrow y 2mks
7. The graph below shows the population of a certain herbivore in two different ecosystems. 2mks



1. Account for the shape of the curves between 0-2years. 3mks
2. Account for the shape of the curve of population in ecosystem B between 6 -8 years. 3mks
3. State two methods which could have been used to determine the population of the organism. 2mks
4. Fig 11.28 shows two cells obtained from two different organisms while the cells were undergoing a certain stage of cell division. Study them and answer the questions that follow.
5. Name the type of cell division the cells were undergoing. Give a reason for your answer. 2mks
6. Name the stage the cells were undergoing. 1mk
7. With a reason in each, identify the type of organism from which cell type I and 2 were obtained. 2mks
8. What is the significance of the above type of cell division? 1mk
9. The diagram below shows the internal structures of a typical flower.
10. Name the parts labeled A-H.

1. What does structure F change to after fertilization?
2. With a reason, suggest the possible agent of pollination of the flower represented above. 1mk
3. State two major pollutants of aquatic habitats that may lead to eutrophication. 2mks
4. Explain three ways by which extensive use of insecticides can disrupt an ecosystem. 3mks

**SECTION B(40MKS)**

**ANSWER QUESTION 6(COMPULSORY) AND EITHER QUESTION 7 OR 8**

1. Briefly describe each of the following types of a sexual reproduction :
2. Binary fission in amoeba 4mks
3. Budding in yeast 5mks
4. Spore formation in Rhizopus nigricans. 6mks
5. State three advantages and two disadvantages of asexual reproduction. 5mks
6. Describe how each of the following factors cause water pollution, suggesting methods for controlling the pollution
7. Domestic effluents. 8mks
8. Industrial wastes. 5mks
9. Agricultural activities. 7mks
10. Describe the distinguishing features of the class insect. 8mks
11. Describe the mechanism of gaseous exchange in terrestrial plants. 12mks