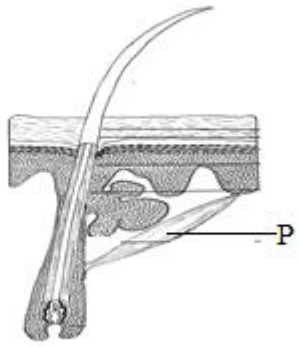
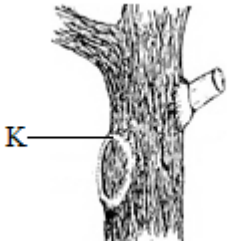
SENIOR CATEGORY EXAM

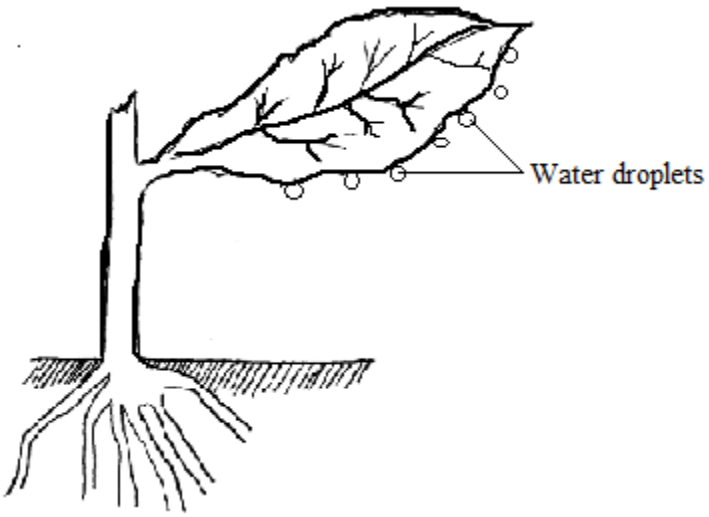
NAME……SCHOOL CODE……

TIME: 1HOUR VENUE: …….

S/N	Question	Maximum Score	Students' Score
1	Describe how seminiferous tubules are adapted to gametogenesis ……..……... ……..……... ……..……...	(2marks)	
2.	Give three morphological features of leaves of mesophytes found in terrestrial habitats with adequate water supply …….. ……..……. ……..……..…….	(3marks)	
3.	The diagram below shows a component of integumentary system. Examine it  a) Give the function of integumentary system ……..……...	(1mark)	
	b) Explain how the part labeled P adapts the organ to the function stated in (a) above …… …… ……	(2marks)	

4.	Describe how cardiac arrest occurs ……..…….. …….. ……	(3marks)	
5.	Variegated leaves experience low rate of transpiration as compared to non-variegated leaves under similar environmental conditions. Explain ……. ……. ……. …….	(3marks)	
6.	Name two characteristics used to place human beings into races …… …….	(2marks)	
7.	A donkey has 62 chromosomes while zebra has 64 chromosomes. Using this information, explain why mule is sterile ……... …….. ……... ……...	(3marks)	
8.	Give three advantages of confining haemoglobin to erythrocytes rather than plasma ……. …… …… ……	(3marks)	
9.	In two successive experiments a group of Maseno school students labeled two test-tubes A and B. They added 1mg of yeast to 1ml of glucose solution in each test-tube but added 1mg of substance Z to test-tube B and immediately added a layer of oil to both test-tubes. They observed that test-tube B took shorter time to produce alcoholic smell than test-tube A. Account for this observation. …… …… …… …….……..	(3marks)	

10.	Give two functions of micropyle in plants …… ……	(2marks)	
11.	a) Name one disadvantageous trait in human beings caused by dominant gene …… b) Describe how independent assortment causes variation …… …… ……..	(1mark) (2marks)	
12.	Describe the role of skin in osmoregulation during hot and dry climatic conditions …… …… ……	(3marks)	
13.	The diagram below shows a tissue labeled K which developed at a point where a branch of the plant had been cut. Examine it  a) Identify the tissue …… b) Name two phytohormones that stimulates development of the above tissue …… ……	(1mark) (2marks)	
14.	Unripe bananas are not sweet but ripe bananas are sweet. Explain …… …… …….	(2marks)	
15.	Explain why water is not required for sexual fertilization in higher plants …… …… …….	(2marks)	

16.	Organisms for genetic studies should have short life cycle. Explain …… …… ……	(2marks)	
17.	Explain why insects lack erythrocytes …… …… ……	(2marks)	
18.	Give two differences between fungi and plants …… …… …… …….	(2marks)	
19.	The diagram below illustrates a method of excretion in plants. Examine it  a) Identify the method of excretion illustrated above …….. b) Name the site in the leaf through which the above process occurs …….. c) Name one force that maintains the above process …….. d) Under which condition do plants carry out excretion by the above method ……	(1mark) (1mark) (1mark) (1mark)	
	TOTAL	**50 MARKS**	