Name: …… **Index no** ……..….....

School: ……..…. **Candidate's sign** ……....

Date: ……

231/3
BIOLOGY
PAPER 3
JULY/AUGUST 2011
TIME: 2 HOURS

KISUMU WEST DISTRICT JOINT EVALUATION TEST

Kenya Certificate of Secondary Education (K.C.S.E.)

Biology
Practical

INSTRUCTIONS TO CANDIDATES:

- *Write your **name** and **index number** in the spaces provided.*
- *Sign and write **date** of examination in the spaces provided above*
- *Answer **all** the questions in section **A** and **B***
- *You are required to spend the first 15 minutes of the 1 ¾ hours allowed for this paper reading the whole paper carefully.*

For Examiner's Use Only:

QUESTIONS	MAXIMUM SCORE	CANDIDATES SCORE
1	13	
2	14	
3	13	
TOTAL	**40**	

This paper consists of 4printed pages. Candidates should check to ascertain that all papers are printed as indicated and that no questions are missing

1. You are provide with a visking tubing, liquids **J** and **K,** iodine solution and DCPIP solution.

a)Use iodine solution to test for the food substance in 2ml. of each the liquids J and K, and record your observations. (2mks)

(i)Observation in liquid **J**

……

(ii) Observation in liquid **K**

……

b) Use DCPIP solution to test for food substance in 2ml. of each of the liquids **J** and **K**, and record your observations. (2mks)

(i)Observation in liquid **J**

……

(ii) Observation in liquid **K**

……

c) Tie one end of the visking tubing tightly using one of the pieces of thread provided. Pour 10ml of liquid J into the visking tubing. Using long dropper. Tie the other end of the visking tubing tightly. Ensure that there is no leakage at both ends of the visking tubing.
pour 30ml. of liquid k into 100ml beaker wash the outside of the visking tubing with distilled water. Place the visking tubing in a horizontal position inside the 100ml beaker containing liquid K. ensure that the visking tubing is fully submerged by liquid K.
allow the set up to stand for 40minutes remove the visking tubing from the beaker.
Using iodine solution and DCPIP solution provided. Carry out tests for food substances in the liquid in 100ml beaker. Record the test, procedure, observation and conclusion in the table below. (4mks)

Test	**Procedure**	**Observation**	**Conclusion**

d) Account for your results in the table above. (5mks)

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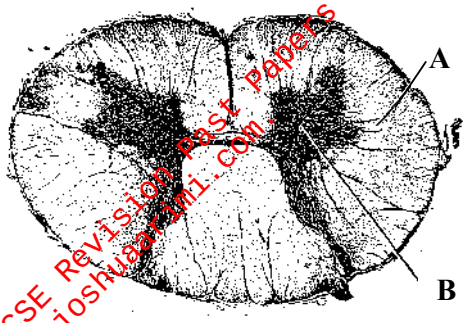
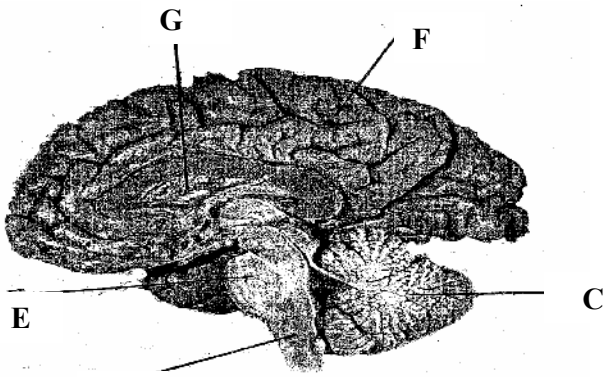
2. Below are photographs of a mammalian spinal cord and brain. Study them carefully and answer the questions that follow.



SPINAL CORD



BRAIN

a) Name the parts labelled **A,C**, and **E** (3mks)

A……

C……

E……

b) State the functions of the parts labeled **B** and **D**. (2mks)

B……

D……

c) The part labeled **G** contains a fluid that extends into the spinal cord.

(i) Identify the part labeled **G.** (1mk)

……

(ii) Name the fluid contained in the part lebelled **G** (1mk)

……

(iii) State **two** functions of the fluid named in **(c)(ii)** above. (2mks)

……

……

d) Explain the significance of the folding in the part labelled **F**. (2mks)

……

e) Part **K** which is found in the brain receives and processes visual information. Label part **K** in the photograph. (1mk)

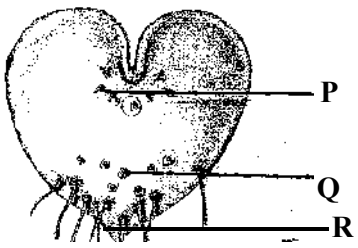
f) Explain why the part labeled **B** is darker than **A** in the spinal cord. (1mk)

……

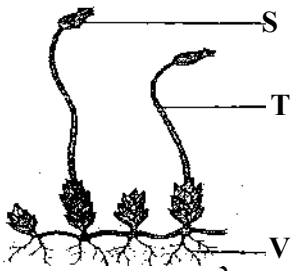
g) State **one** difference between nervous system and endocrine system. (1mk)

……

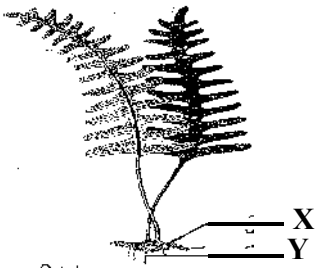
3. Photographs I, II, III below were taken from organisms under kingdom plantae.
Photographs I and III belong to two organisms under the same division, and one organisms gives rise to another in the process of alteration of generations..



PHOTOGRAPH I



PHOTOGRAPH II



PHOTOGRAPH III

a)Name the division to which each of the organisms in photographs I and II belongs. (2mks)

(i) Division in photograph I……

(ii) Division in Photograph II……

b) Identify the parts labeled **Q**,**T** and **X**. (3mks)

Q……

T……

X……

c) The parts labeled **R,V** and **Y** perform the same function. State their function. (1mk)

……

d) (i) Name the spore producing structure in the organism in photograph **II**. (1mk)

……

(ii) Which of the photographs **I** and **II** was taken from an organism that represents the dominant generation in their division? (1mk)

……

e) Identify each of the organisms in photograph **I** and **II.** (2mks)

(i) Organisms in photograph **I**……

(ii) Organism in photograph **II**……

f) Describe how the organism in photograph **III** is formed from that in photograph **I.** (3mks)

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