

Name..... Index No:.....

231/3

Candidate's Signature

BIOLOGY

Date:

Paper 3

(Practical)

JULY/AUGUST 2014

Time: 1 $\frac{3}{4}$ Hours

NYATIKE SUB -COUNTY JOINT EVALUATION EXAM

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

Biology
Paper 3
Practical
1 $\frac{3}{4}$ Hours

INSTRUCTIONS TO CANDIDATES

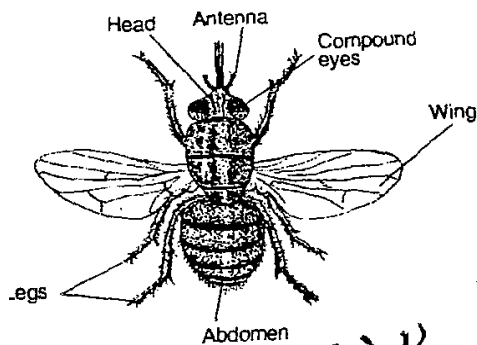
- Answer ***all*** the questions in the spaces provided.
- You are required to spend 15 minutes of the 1 $\frac{3}{4}$ hours allowed for this paper reading the whole paper carefully before commencing your work.
- Answer must be written in the spaces provided.
- Additional pages must not be inserted.

For Examiners Use Only

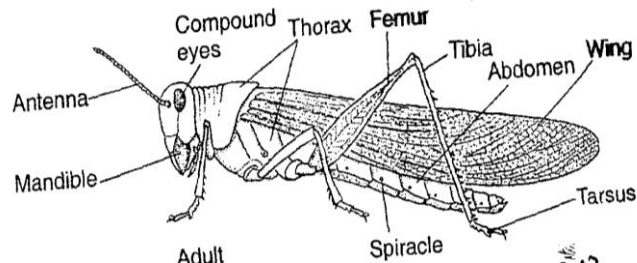
Question	Maximum score	Candidate's score
1	14	
2	16	
3	10	
TOTAL		

This paper consists of 8 printed pages. Candidates should check to ascertain that all pages are printed as indicated and that no questions are missing.

1 (a) Study the photographs below for specimen R and S



Specimen R



Specimen S

i) State **two** observable differences between the specimen R and S (2mks)

Specimen R	Specimen S

ii) Suggest the advantage of the adaptations on the limbs of specimen S (2mks)

.....

b) i) Name the phylum and the class to which the specimens belong

Phylum

Class.....

ii) State **two** distinguishing features found in the members of

Phylum

Class.....

Complete	Incomplete

State the specimen that exhibit;

i) Complete metamorphosis

(1 mk)

.....
.....

ii) Incomplete metamorphosis

(1 mk)

.....
.....

2. You are provided with a solution T and sodium chloride in two different concentrations 0.1% and 1.4%. Place 3ml of starch solution in a test-tube labeled 1,2 and 3. Add 3 drops of 0.1% sodium chloride to test tube labeled 2 and 1.4% sodium chloride solution to test tube labeled 3. Add 3ml of solution L to each test tube labeled 2 and 3

a) Place a drop of the contents from each test tube 1,2 and 3 on a white tile. To each drop add iodine solution. Record your result in the table below (3mks)

Test-tube	Treatment	Observation at start of experiment	Observation at end of experiment
1	Starch		
2	Starch to 1.0% NaCl + L		
3	Starch+ 1.4%NaCl+ L		

b) Place the test tubes in water bath maintained at 37°C. Allow to stand for 30 minutes. Place a drop of the contents from each test tube on a white tile. To each drop add iodine solution. Record your observations in the table above

c) Add equal amounts of Benedict's solution in test tubes labeled 2 and 3 and boil. Record your observation below

Test —tube 2

(1mk)

.....
.....

Test —tube 3

(1mk)

.....
.....

d) Why was the test tube labeled 1 included in the experiment

(1mk)

.....
.....

e) Account for the results in test tube 1,2 and 3 at the end of the experiment

(4mks)

.....
.....
.....

f) Suggest the identity of solution L

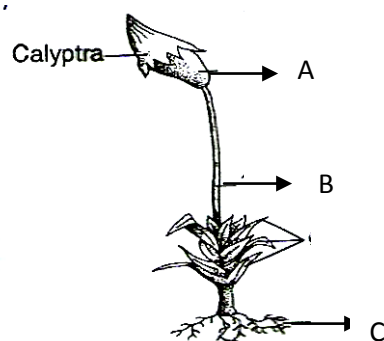
(1mk)

g) Why were the test-tubes placed in a water bath maintained at 37°C

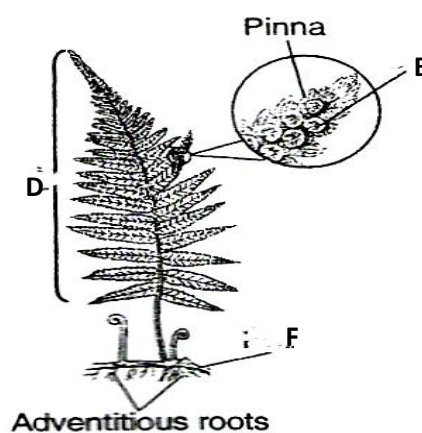
(1mk)

3 (a) (i) On diagram P and Q label the parts **A,B,C,D,E** and **F**

(3mks)



Specimen P



Specimen Q

ii) Name the divisions of **P** and **Q**

(2mks)

P

Q

b) From the diagram name the organ of reproduction

(2mks)

P

Q

c) On diagram P show the part representing gametophyte and sporophyte

(2mks)

d) Name the gametophyte of specimen Q

(1mk)

Q

(1mk)

ANSWERS:

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