NAME: _____INDEX NO: _____

DATE: _____ CANDIDATE'S SIGN: _____

231/3
BIOLOGY
PAPER 3
PRACTICAL
JULY 2019
TIME: 1 ¾ HOURS

MOKASA II JOINT EVALUATION EXAMINATION

Kenya Certificate of Secondary Education

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BIOLOGY
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INSTRUCTIONS TO CANDIDATES

- Write your Name and Index No. in the spaces provided above
- Answer ALL the questions in the spaces provided

FOR EXAMINERS USE ONLY

QUESTION	MAXIMUM SCORE	CANDIDATES SCORE
1		
2		
3		
TOTAL		

1. You are provided with the following: pieces of thread, two pieces of visking tubing 6cm, Distilled water in a beaker, iodine solution in a beaker, Solution Y and Solution X. Open the two visking tubings and tie one end tightly. Using a dropper put 4 cm3 of Solution Y and 4 cm3 of solution X into each visking tubing, respectively. Ensure that the visking tubing containing solution X is immersed in the beaker containing iodine solution(set up **B)** and the visking tubing containing solution Y is immersed in beaker containing Distilled water (set up **A)** . Leave the set up for 30 minutes. Remove the Visking tubing and make observation

(a) State the observations 2 Marks

A……
……
……
…….

B……
……
……
……

(b) State the physiological process in 2Marks

A……

B……

(c) Account for the observation made in

A……
……
……
…….. 2(marks)

B……
……
……
…… 3(marks)

(d) State the importance of physiological process **A** in plants 2 Marks

……

……

……

……

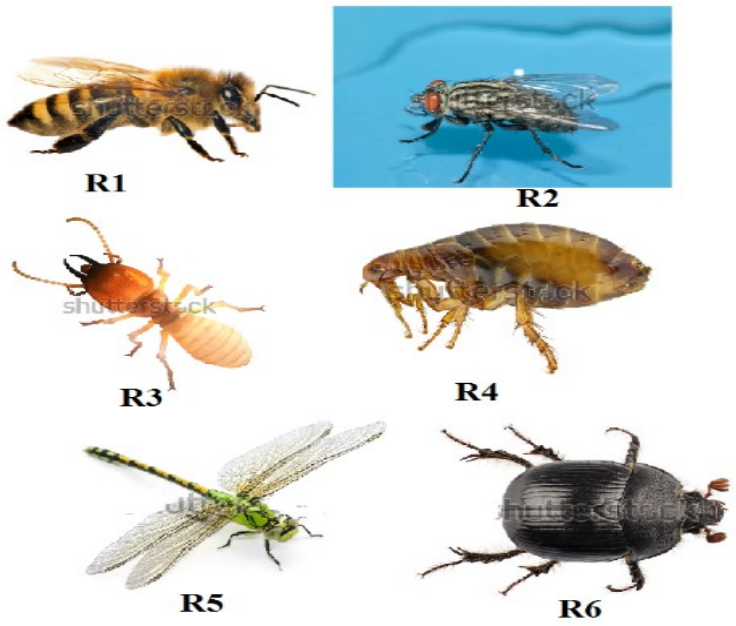
(e) How can you speed the process in **B**? 1Mark

……

……

……..

2. Below are photographs of invertebrates which belong to the same class. Examine them



a) To which class do the above invertebrates belong? 1Mark

……

……

b) State two characteristics of the class named in (a) above 2 Marks

……

……

……

……

……

c) Complete the dichotomous key below to identify the invertebrates to their orders 3marks

1a. Animal with wings …… go to 3

b. ……go to 2

2a. Animal with hairy body ……Siphonoptera

b. Animal with smooth body……Isoptera

3a. Animal with one pair of wings……...Diptera

b. …….....go to 4

4a. Fore wings hard/elytra……Coleoptera

b. ……. ....Go to 5

5a. Long slender abdomen……Odonata

b. Short broad abdomen……..Hymenoptera

d) Using the dichotomous key above, identify to which orders the various organisms belong. In each case write down the steps that you followed to arrive at your answer. (6mks)

Specimen	Steps	Identity
R1		
R2		
R3		
R4		
R5		
R6		

3. You are provided with specimen **K**. Use it to answer the questions that follow

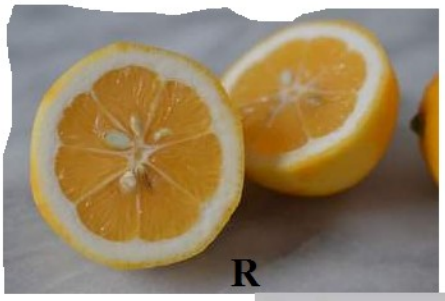
a) Describe the floral parts 3 Marks

b) Cut the specimen **K** longitudinally. Draw one of the sections 4 marks

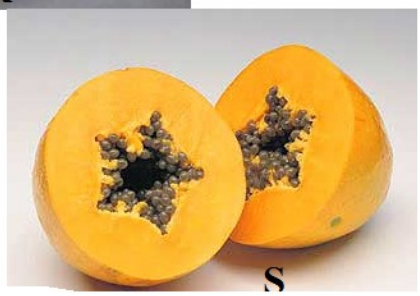
c) With a reason state the agent of pollination 2 Marks

……
……
……..

d) The photographs labelled **Q, R**,and **S** are sections of some plant parts.







(i) Name the type of placentation in the specimens shown in photographs **Q, R** and **S** (3 marks)

Q…….

R…….

S…….

(ii) Giving a reason in each case, name the mode of dispersal of the specimen in photograph **Q** and **S** (4mark)

Q Mode……..

Reason

……

……

……..

S

Mode……..

Reason

……

……

……

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