Name_____ **Index No.** _____

Candidates signature _____

Date _____

231/3
BIOLOGY
PAPER 3
PRACTICAL
JULY/AUGUST 2014
1 ¾ HOURS

KANGUNDO DISTRICT FORM IV MULTILATERAL EXAM 2014
Kenya Certificate of Secondary Education
BIOLOGY
PAPER 3
1 ¾ HOURS

INSTRUCTIONS TO CANDIDATES
(a) Write your name and the index number in the spaces provided above.
(b) Sign and write the date of examination in the spaces provided above
(c) Answer all the questions in the spaces provided
(d) You are required to spend the first 15 minutes of the 1 ¾ hours allowed for this paper reading the whole paper carefully before commencing your work
(e) Additional pages must not be added

For examiner's use only

Question	**Maximum score**	**Candidate score**
1	15	
2	13	
3	12	
Total	40	

This paper consists of 7 printed pages

1. You are issued with solutions labeled P_1, P_2, P_3. Benedict's solution and iodine solution. Solution P_3 is similar with P_2 except that it has been boiled.
(a) Use iodine and Benedict's solutions to test food substances contained in solution P_1. Record your results in the table below.

Food substance	Procedure	Observation	Conclusion

Label three test tube X_1, X_2 and X_3. Treat each test tube as follows

Test tube	Treatment
X_1	Put 1ml of solution P1
X_2	Put 1ml of solution P_1 and add 1 ml of solution P_2
X_3	Put 1ml of solution P_1 and 1ml solution P_3

Place the three test tubes in a warm water bath whose temperature is maintained between 30^0C and 37^0C
Leave the set ups for 30 minutes

(b) Test the food substance contained in each test tube by using Benedict's solution. Record your results in the table below.

Test tube	Observation	Conclusion
X_1		
X_2		
X_3		

(c) Account for the results at the end of the experiment in test tube labeled X_2 and X_3

(i) X_2 (2mks)

_____

_____

_____

(ii) X_3 (1mk)

_____

_____

_____

(d) (i) Suggest the identity of solution P_2 (1mk)

_____

_____

_____

(ii) Give one reason for your answer in d (i) above (1mk)

_____

_____

_____

(e) What was the role of test tube X_1 during the experiment? (1mk)

_____

_____

_____

(f) (i) Suggest where the process being investigated in this experiment would take place in a mammalian body (1mk)

_____

_____

_____

(ii) Give a reason for your answer in f (i) above (1mk)

_____

_____

_____

2. Study photograph P below and use it to answer the following questions.

PHOTOGRAPH P

(a) On the photograph label a bract (1mk)

_____

_____

_____

(b) Describe the arrangement of stamens and structure of corolla and calyx

(i) Stamens (1mk)

_____

_____

_____

(ii) Corolla (1mk)

_____

_____

_____

(iii) Calyx (1mk)

_____

_____

_____

(c) (i) Name the class of the plant from which the photograph was taken (1mk)

_____

_____

_____

(ii) Using only observable features on the photograph give one reason for your answer in c (i) above (1mk)

_____

_____

_____

(d) (i) Suggest the agent of pollination for the flower shown on the photograph (1mk)

_____

_____

_____

(ii) Give two reasons for your answer in d (i) above (2mks)

_____

_____

_____

_____

(e) (i) Which type of ovary is found in the flower on the photograph (1mk)

_____

_____

_____

(ii) Give a reason for your answer in e (i) above (1mk)

_____

_____

_____

(f) The actual length of the flower measured 14cm. Work out the magnification of the photograph (2mks)

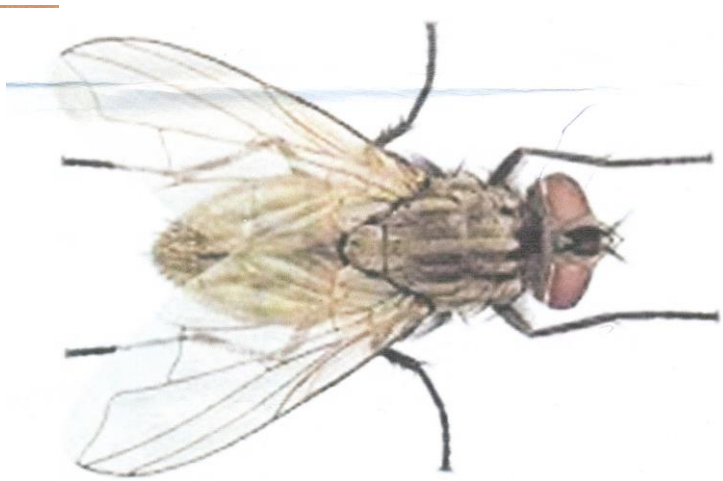
_____

_____

_____

_____

3. You are provided with photographs of specimens V and W. Examine them.



PHOTOGRAPH V **PHOTOGRAPH W**

(a) (i) Name the phylum to which the specimens belong. (1mk)

_____

_____

_____

(ii) Using observable features only, give two reasons for your answer in a (i) above (2mks)

_____

_____

_____

(b) (i) Suggest the class to which the specimens belong (1mk)

_____

_____

_____

(ii) Give two visible distinguishing feature found in the members of class you have named in b (i) above (2mks)

_____

_____

_____

(c) State two differences between the hind limps of specimen V and W (2mks)

_____

_____

_____

(d) State one way in which the hand limps of specimen V is adapted to its functions (1mk)

_____

_____

_____

(e) (i) Which tropic level is occupied by specimen V in the ecosystem? (1mk)

_____

_____

_____

(ii) Give a reason fro your answer (1mk)

_____

_____

_____

(f) Suggest one economic importance of specimen W in the environment (1mk)

_____

_____

_____

ANSWERS:
Order a copy of answers from www.schoolsnetkenya.com/order-e-copy
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