

NAME: \_\_\_\_\_ INDEX NO: \_\_\_\_\_

SCHOOL: \_\_\_\_\_ ADM NO: \_\_\_\_\_

DATE: \_\_\_\_\_ SIGN: \_\_\_\_\_

231/3

## **BIOLOGY**

Paper 3 (practical)

**Time: 1hr 45mins**

### **SCHOOL BASED EVALUATION TEST**

#### **INSTRUCTION TO CANDIDATES**

- a) Write your name and index number in the space provided at the top of this page
- b) Sign and write the date of the examination in the spaces provided above
- c) Answer all the questions
- d) You are required to spend the first 15 minutes of the 1 ¾ Hours allowed for this paper reading the whole paper before commencing your work
- e) Answers must be written in the spaces provided in the question paper
- f) Additional pages must not be inserted

#### **FOR EXAMINATION USE ONLY**

Question	Maximum score	Candidate score
1	14	
2	13	
3	13	
TOTAL	40	

1. You are provided with:

-Solution Q

-Distilled water in 100 ml beaker

-Visking tubing and two threads

-Glass rod

-2 test tubes and two labels

-Benedict's solution 10% sodium hydroxide solution and 1% copper sulphate solution.

PROCEDURE:

-Tie the visking tubing tightly at one end using the thread and put about  $\frac{3}{4}$  of solution Q. Tie tightly the other end ensuring that there is no leakage.

-Place the visking tubing in the distilled water in 100ml beaker and support it by tying the thread on a glass rod over the beaker.

- Allow the set up to stand for 30mins.

-After 30mins, remove the visking tubing from the distilled water.

-Using a syringe draw about 5ml of the contents in the beaker labeled distilled water. Put it in the test tube and label it G. Repeat the same procedure to obtain 5ml of solution in the visking tubing, put in another test tube and label it H.

a) Using the reagents provided, carry out food tests to determine the components in substance G and H and fill the table below.

Substance	Test	Procedure	Observation	Conclusion
G				
H				

8mks

b) Substance Q was obtained from a patient in a hospital laboratory. Name two conditions that the patient was suffering from. (2mks)

.....

.....

.....

c) (i) What physiological activities that took place in the experiment you undertook above. (1mk)

.....

.....

.....

(ii) Account for your answer in C (i) above. (3mks)

.....

.....

.....

.....

.....

.....

2 You are provided with specimens W, X and Y.

a) Observe the specimen and complete the table below.

Specimen	Type of the plant organ represented by the specimen	Reason
W		
X		
Y		

b) Cut a transverse section of specimen W and on it label the parts which developed from the mature flower parts named below: (3mks)

-Outer ovary wall

-Embryo sac

c) (i) Which plant organ is specimen X? (1mk)

.....

.....

(ii) State the observable features to support your answer in C (i) above. (1mk)

.....

.....

d) Open specimen X longitudinally to display the inner parts. Describe its placentation. (1mk)

.....

.....

e) Explain two adaptive features of specimen Y to its mode of dispersal. (2mks)

.....

.....

.....

.....

.....

3. You are provided with specimens K, L and a hand lens. Study them carefully and then answer the questions that follow.

a) (i) To which class do the specimens K and L belong? (2mks)

Specimen

Class

K

.....

L

.....

ii) Specimen K and L belong to the same phylum. Give one feature common to both that is used to place them into their phylum. (1mk)

.....

.....

b) State three observable differences between K and L. (3mks)

.....

.....

.....

.....

.....

c) (i) Name the mode of feeding of specimen K. (1mk)

.....

.....

(ii) In what two ways is specimen K adapted to the mode of feeding stated above. (2mks)

.....

.....

.....

.....

.....

d) State two roles of specimen L in an ecosystem. (2mks)

.....

.....

.....

.....

e) Using the number of locomotory structures, construct a one step dichotomous key that can be used to identify specimens K and L. (2mks)

.....

.....

.....

END

