

## UCE MOCK EXAMINATIONS 2016

### BIOLOGY PRACTICAL

#### PAPER 2

TIME 2 HOURS

#### INSTRUCTIONS

Answer all questions

Drawings should be done in the spaces provided

Use sharp pencils for your drawings

Coloured pencils or crayons should not be used.

1. You are provided with solution X which contains a food nutrient and chemical reagent Z label test tubes A to F
- a) Using a dropper or measuring cylinder, measure the following quantities of solution X into test tubes Labeled A to E

Table 1

Test tube	A	B	C	D	E
Volume of X (cm <sup>3</sup> )	1	2	3	4	5

- i) Increase the total volume of solutions in the test tubes A, B, C, D and E to uniform volume of 5 cm<sup>3</sup> by adding water.
- ii) Record the volume of water added to each test tube in table II below. (02 ½ marks)

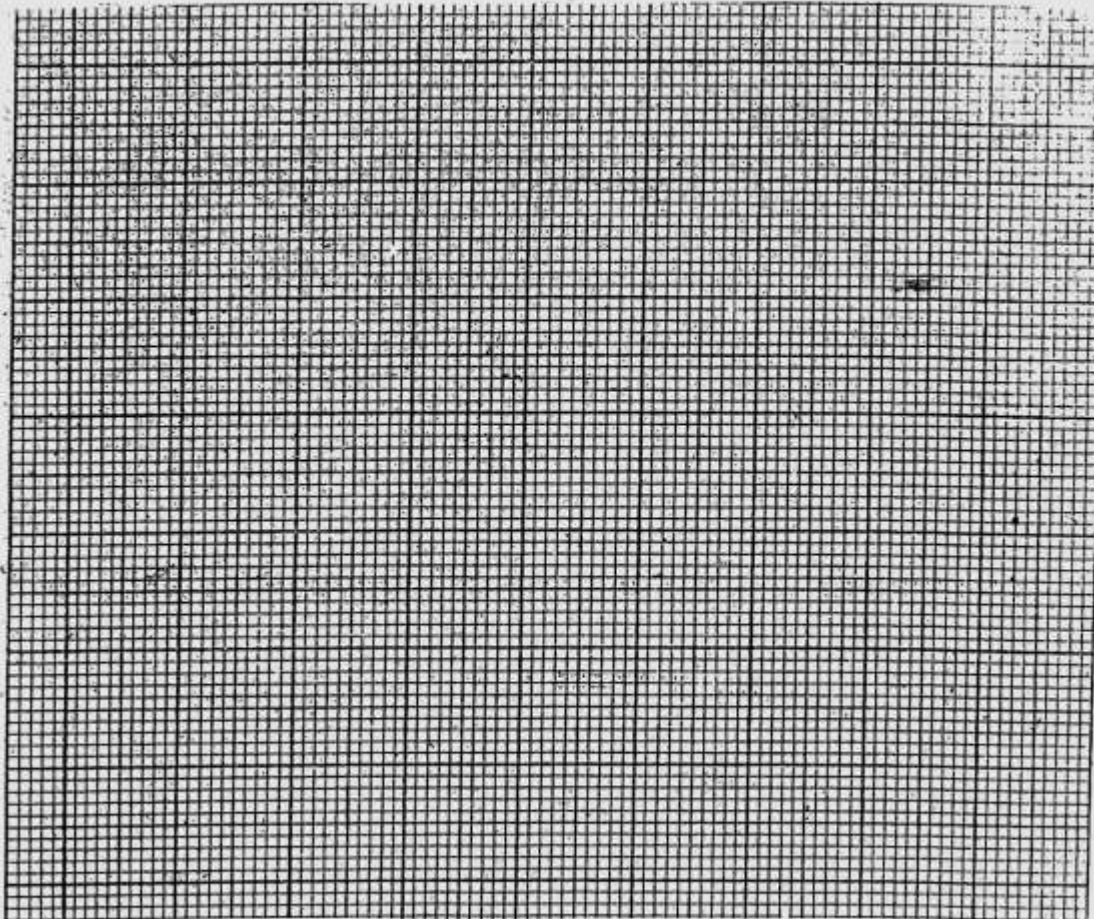
Test tube	A	B	C	D	E
Volume of water (cm <sup>3</sup> )					

- iii) Measure 1 cm<sup>3</sup> of solution Z into test tube F  
Using a dropper, add solution X from test tube A drop wise to solution Z in test tube F, while shaking the test tube.  
Count the number of drops required to decolourise solution X and record your results in table III below  
Pour the mixture in test tube F and wash it thoroughly  
Repeat the procedure above using solution X from test tubes B, C, D and E. (02 marks)

Table III

Test tube	A	B	C	D	E
Number of drops added to decolourise solution Z					

b) In the space provided below, draw a graph to show the relationship between the number of drops added (from table III) and the volume of X (from table I) (06 marks)



(C) Explain the effect of the water (02 marks)

On solution X

- d) Giving a reason, suggest the identity of  
i) Food nutrient in solution X

(04 marks)

Reason.

- ii) Solution Z

Reason.

- e) State ~~two~~ biological importance of food nutrient in solution x

(01 mark)

- f) What conclusion can be made from the results of in (a) above.

(01 mark)



2. You are provided with specimen K,L and M which are from the same animal

a) From which part of the animal was each specimen taken

K

L

M

b) Give three functions common to specimens K, L and M and the feature that enable the specimens to perform their functions. (06 marks)

function	Feature

c) State three observable differences between specimens L and M. (03 marks)

Specimen L	Specimen M

- d) State the names of the bone (s) with which specimen K articulates at both ends (upper and lower ends) and using observable with which specimen K articulates at both ends (upper and lower ends) and using observable features, suggest the type of joint formed at each end.

Bone (s) at upper (anterior) end

Joint at upper end

Bone (s) at lower (posterior) end

Joint at lower end

- e) Draw and label specimen M (05 marks)

3. You are provided with specimen P and Q which are plant parts.

a) Giving two reasons, name the part of the plant to which specimens P and Q belong. (02 marks)

Part of the plant.

Reasons

b) Describe the following structures of specimen P and Q (08 marks)

Structure	Specimen p	Specimen Q
Stamens		
Pistil		

e) i) State the agent of pollination for specimen P

(01 mark)

ii) How is specimen P adapted to being pollinated by the agent mentioned in c (i) above (03 marks)

d) Remove the sepals and stamens from specimen Q

Draw and label the remaining part of the specimen. (06 marks)