

FORM FOUR CLUSTER KCSE MODEL 7

BIOLOGY PAPER 3 QUESTIONS

1. You are provided with specimen labeled K which is a piece of a fruit, solutions labeled S1, S2 and 2 petri dishes.

(a) i) What type of fruit is specimen K.

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(ii) Give a reason for your answer in (a)i)above.

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(b) i) Name the type of placentation in the fruit from which the specimen K was obtained.

.....

(ii) Give a reason

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(c) Cut specimen K lengthwise into 4 strips. Each strip should be 5mm wide.

Describe the shape and texture of the 4 strips.

(d) Place two strips into solution labelled S1. Place another two strips into solution labelled S2. Allow the experimental set ups to stand for 30 minutes.

Describe the shape and texture of strips after 30 minutes

(i) Strips in solution S1

Shape

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.....

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Texture

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.....
.....

Shape.....

Texture.....

(ii) Strips in solution S2

Shape:.....

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Texture:.....

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.....

(e) Account for the results in (d)

(i) and (ii) above.

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2. Attached and titled photograph for question 2' is a photograph of structures involved in a certain process in a human body.

Examine the photograph.

(a) Identify the structures A and B.

Identity of A

Identity of B

(b). Name the part of the body from where each structure named A above is located in the animal from which they were obtained.

Structure A

Structure B.....

(c). What is the relationship between structure A and structure B in terms of their functions?

For each structure, name observable features and state how each feature adapts the structure to its function.

Structure	Feature	How the feature adapts the structure to its function
A		
B		

3. (b) Place about 10ml of a fresh sample of BTB in a clean boiling tube.

Using a drinking straw provided, blow air into BTB until there occurs a colour change.

(i) State the colour obtained when air is blown to BTB.

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(ii) What does this colour change tell about the nature of the gas breathed out?

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NOTE: Preserve the solution obtained in (b) above for experiment (d)

(c) Place about 2ml of solution X in a clean test tube. Using a drinking straw blow air into the solution.

(i) State your observation

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.....

(ii) Give the identity of solution X

(iii) Name the gas which gave rise to observation made above in (c)(i)

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(iv) Explain how this gas produced in the body.

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(d) To the solution that you had preserved from experiment (b) add some specimen L. Use enough quantity to be covered by the solution. Place the boiling tube and its contents in a place where it will receive maximum light for 45-60 minutes.

NOTE; While you wait for this time to elapse proceed with other questions.

(i) What colour change do you observe in the solution?

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(ii) Account for the observation.

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(iii) What results will be obtained if experiment (d) was conducted in darkness for 45-60 minutes?