

FORM FOUR CLUSTER KCSE MODEL2

BIOLOGY PAPER 3 QUESTIONS

1. You are provided with solutions labelled P and N.
- a) Use iodine solution to test for the food substance present in solution P. Food substance. (1 mark)
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Procedure. (1 mark)
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Observation. (1 mark)
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.....
Conclusion. (1 mark)
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- b) Use Benedict's solution to test the presence of the food substance in solution P. Food substance (1 mark)
- Procedure. (1 mark)
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.....
- Observation. (1 mark)
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- Conclusion. (1 mark)
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- c) Place 3 ml of solution P in a test tube. Add 3 ml of solution N and place the test tube in a water bath maintained at 37°C. Allow to stand for about 30 minutes. Test for food substance using Benedict's solution. i) Record your observation. (1 mark)
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ii) Account for your observation in c (i) above (2marks)
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- d) Suggest the identity of solution N. (1 mark)
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- e) Why was the test tube placed in a water bath maintained at 37°C? (1 mark)
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2. Attached R, S and T are photographs of animal specimens.
- a) i) State the phylum to which the organisms in the photograph belong to. (1 mark)

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ii) Give two reasons your answer in 3 (a) i above. (2marks)

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b) Using observable features only, classify the animals into their respective classes. R Class. (1 mark)

Features. (3mrks)

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S Class. (1 mark)

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Features (2marks)

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T Class. (1 mark)

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Features. (2marks)

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c) State three observable differences between specimens R and S. (3marks)

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3. Attached P and Q are photographs of tissues of specimens taken from the same organism which were observed under a light microscope at different magnifications.

a) With a reason state the kingdom to which the organism the specimens were taken from belongs to. (2marks)

Kingdom.

b) Reason.

c) During the preparation of specimens P and Q, very thin sections were cut, kept in distilled water in a petri dish and latter stained.

State the significance of each process. (3marks)

Cutting thin sections

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Keeping sections in distilled water

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Staining of the sections.

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d) Make a drawing of one cell showing how the cells will appear if the specimen was placed in saturated salt solution. (2marks)

i) Label the structures K and L. (2marks)

K.....

L

ii) State two ways in which the structure L is used to its function. (2marks)

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