

NAME.....Comb.....

P530/3

BIOLOGY

(Practical)

Paper 3

July. 2024

3¼ hour

INTERNAL MOCK EXAMINATION SET2

Uganda Advanced Certificate of Education

BIOLOGY

(PRACTICAL)

Paper 3

3 hour 15 minutes

INSTRUCTIONS:

Write the answers in the spaces provided. **No** additional sheet of paper should be used.

You are advised to plan and present neat and clean work.

1. You are provided with specimen **K** which is freshly killed.

(a) Examine the specimen, with reasons state the phylum to which the specimen belongs. (04 marks)

(i) Phylum

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(ii) Reasons

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(b) Examine the last tergum of the specimen from the ventral view.

i) Draw and label

(07 marks)

ii) Giving reasons state the sex of the specimen.

(04 marks)

Sex

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Reasons

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(c) Pin specimen K with the dorsal side uppermost. Dissect along the right lateral line of the specimen. Displace the dorsal cuticle and clear any fat tissue. Without displacing any other structures, draw and label visible structures on ventral and dorsal cuticle. (25 marks)

2. You are provided with solution A and B both of which are food mixtures. Using the reagents provided carry out tests on A and B for the food substances specified in the table below. Record your tests, observations and inferences. (25 marks)

Experiment	Solution	Observation	Inferences
Biuret test	A		
	B		
Starch	A		
Reducing sugars			
Non-reducing sugars	A		
	B		

Vitamin C	A		
	B		

Solution A contains.....

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Solution B contains

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b) Obtain 6cm³ of the food mixture B. label three test tubes, **1, 2 and 3** add 2cm³ of the mixture to each test tube.

Rinse your mouth with water and spit out about 2cm³ of saliva into a test tube. Dilute with **equal volume of water**.

To test tube **1** add 1cm³ of saliva.

To test tube **2** add 1cm³ of saliva and 4 drops of sodium hydroxide

To test tube **3** add 1cm³ of saliva and 4 drops hydrochloric acid.

Incubate all the three test tubes in a water bath maintained at 37-40°C for 20 minutes.

i) Carry out tests for starch in all the three test tubes, 1, 2 and 3 (06 marks)

Test tube	Observations	Inferences
1		
2		
3		

ii) Explain the results obtained in tests tubes in b) (i) above (04 marks)

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3. You are provided with specimen F, G, H, and J. study them carefully and answer the questions that follow.

With reasons, identify the phylum to which each belong. (04 marks)

Phylum.....

Reasons

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b) Identify the class to which specimen G belong. Give a reason for your answer. (03 marks)

Class of G.....

Reason

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c) Examine specimen F and G state three differences between them.

(03 mark)

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d) i) With aid of a hand lens examine the thorax of specimen H, describe the features of the thorax. (02 marks)

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ii) Explain how the features of thorax enable it to survive in its habitat. (03 marks)

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e) Explain the ecological significance of specimen H in nature. (03 marks)

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f) Draw the head of specimen J. (04 marks)

(g) Using a hand lens examine the antennae of the specimens, construct a dichotomous key to identify them in the order F,J and H. (03 mark)

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END

Confidential

Each student should be provided with;

Specimen K – Cockroach

Specimen G – Tick

Specimen H - Honey bee

Specimen J - Termite

Specimen F - Housefly

Solution B Mixture of starch, sucrose, glucose and vitamin C.

Solution A mixture of glucose and sucrose

Sodium hydroxide solution

Hydrochloric acid

All reagents for food test

Source of heat

Six(6) test tubes

END