

Name.....

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P553/3

Biology practical

Paper 2

August 2023



PEAS NETWORK MOCK EXAMINATIONS

UGANDA CERTIFICATE OF EDUCATION

BIOLOGY PRACTICAL

PAPER 2

2 HOURS

Instructions to candidates

- ❖ Answer all questions.
- ❖ All answers must be written in spaces provided.
- ❖ Use sharp pencils for your drawings.
- ❖ Coloured pencils or ink must not be used.
- ❖ Additional pages must be inserted.

Question	Marks
1	
2	
3	
Total	

1. You are provided with solutions, dilute hydrochloric acid, dilute sodium hydroxide and distilled water.

You are also provided with 6 pieces of liver and a razor blade. Cut a small piece liver measuring $0.5 \times 0.5 \times 0.5$, boil one piece for 5 minutes.

Carry out the following tests using liver and the solutions provided.

Record your observations and deductions in the table below. (12 marks)

a)

Tests	Observations	Deductions
(i) To 3cm^3 of solution x, add a piece of un boiled liver.		
(ii) To 3cm^3 of solution x, add 1cm^3 of dilute sodium hydroxide solution followed by a piece of un boiled liver.		

(iii) To 3cm ³ of solution x, add 1 cm ³ of dilute hydrochloric acid Followed by a piece of un boiled liver.		
(iv) To 3cm ³ of solution x, add 1 cm ³ of distilled water followed by a piece of un boiled liver.		
(v) To 3cm ³ of solution add a piece of boiled liver.		
(vi) To 3cm ³ of solution x, add a piece of un boiled liver.		

b) What is the nature of solution x

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b) (ii) explain the results in tests;

(ii)

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(iii)

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(vi)

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c) State two properties of the active substance in the liver (1 mark)

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2. You are provided with specimens B, C, and D which are animals.

(a) State the phylum and class to which they belong. Give two reasons for the phylum and class given. (6 marks)

Phylum

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Reasons

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Class

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Reasons

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(b) Examine the specimens C and D using a hand lens where necessary and describe three structural differences between the specimens. (3 marks)

Specimen C	Specimen D

(C) (i) Describe the wings of specimen B (2 marks)

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(ii) How are the wings of specimen B adapted to their functions?

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d) Cut off the wings of specimen B as close to the body as possible. Draw and label the dorsal view of the thorax with the right hand leg. (7 marks)

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3. You are provided with specimens R, S and T which are plant parts. Cut the transverse sections of the specimens R and S.

a) (i) Identify the plant parts to which the specimens belong. Give two reasons for your answer. (3 marks)

Identity

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Reasons

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(ii) State four structural differences between R and S (4 marks)

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Specimen R	Specimen S

b) Using observable features, describe how each specimen is dispersed.

(i) Specimen R

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(ii)Specimen S

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(iii) Specimen T

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C) Draw and label the mesocarp and internal structures inside it of specimen S. State your magnification.(7 marks)

END

