

STUDENT'S NAME:

SCHOOL NAME: INDEX NUMBER

553/3

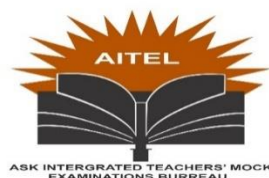
BIOLOGY

(Practical)

Paper 3

July/Aug. 2022

2 hours



AITEL JOINT MOCK EXAMINATIONS

Uganda Certificate of Education

BIOLOGY

(PRACTICAL)

Paper 3

2 hours

INSTRUCTIONS TO CANDIDATES:

*This paper consists of **three** questions. Answer all questions,*

Drawing should be made in the spaces provided

*Use **sharp pencils** for your drawings.*

Coloured pencils or crayons should not be used.

No additional sheets of writings are to be inserted in this booklet.

*Work on additional sheets will **not** be marked.*

FOR EXAMINER'S USE ONLY		
Question	Marks	Examiners Signature & No.
1		
2		
3		
Total		

1. You are provided with solution A1 and A2. Use the reagents provided to carry out tests in order to identify the food substances in the solutions. Record your observations in the table below.

(12 Marks)

Procedure	Observation	Deduction
(i) To 1 cm ³ of solution A1 in a test tube add 3 drops of Iodine solution		
(ii) To 1 cm ³ of solution A2 in a test tube, add 3 drops of Iodine solution		
(iii) To 1 cm ³ of solution A1, add 1cm of Benedict's solution and boil for 1minute		
(iv) To 1 cm ³ of solution A2, add 1cm of Benedict's solution and boil for 1minute		
(v) To 2 cm ³ of solution A1, add 1cm of Sodium hydroxide followed by 4 drops of copper (II) Sulphate		
(vi) To 2 cm ³ of solution A2, add 1cm of Sodium hydroxide followed by 4 drops of copper (II) Sulphate		

- (a) From your observations and deductions, suggest the food composition of solution A1 and A2
Solution A1 (01 Mark)

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Solution A2 (01 Mark)

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- (b) What is the Biological significance of the food substance identified in Solution A1
(02 Marks)

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- (c) List any 4 food sources of the food components identified in solution A2 (04 Marks)

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2. You are provided with specimens **K, L, M** which are plant organisms. Examine them and answer the questions that follow

- (a) (i) Make a longitudinal section of specimen **K** and **L** and examine one half of each
Describe the structure of the specimens in the table below (03 marks)

Specimen	Description of pericarp	Number of seeds

(ii) Construct a dichotomous key using the characteristics you have given in the table above to identify the specimens (03 marks)

(b) Describe how specimen **M** and **N** are dispersed (04 marks)

M

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.....

N

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.....

(c) Draw a labeled drawing of one longitudinal section of Specimen **L** and state your magnification (07 marks)

(d) Describe the seed arrangement of specimen **L** and state the type placentation (03 marks)

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3. You are provided with specimen **A**

(a) Identify the phylum and class to which the specimen belongs giving a reason in each case

Phylum: (01 mark)

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Reason: (01 mark)

.....

Class: (01 mark)

.....

Reason: (01 mark)

.....

(b) (i) Name the type of habitat for specimen **A** (01 mark)

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(ii) Basing on observable external features only, give four (4) ways how specimen **A** is adapted to its habitat. (03 marks)

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(c) (i) Identify the structures that cover the body of specimen **A** (01 mark)

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(ii) Carefully remove one of the structures identified above, using a hand lens make a large drawing of it and state your magnification (06 marks)

(d) (i) How is the structure adapted to its function? (03 marks)

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(ii) Describe the arrangement of these structures on body of specimen A and state the importance of this arrangement. (02 marks)

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END