

SC5043  
WASSCE 2020  
BIOLOGY 3  
Practical  
2 hours

3

Name .....

Index Number .....

THE WEST AFRICAN EXAMINATIONS COUNCIL  
West African Senior School Certificate Examination  
for School Candidates

SC 2020

BIOLOGY 3

2 hours

PRACTICAL

*Write your name and index number in ink in the spaces provided above.*

*Answer all the questions in Section A, and in addition all the questions in either Section B or C.*

*No mark will be awarded for answering questions from any part not peculiar to your own country.*

*Write your answers in your practical answer booklet.*

*Use both sides of the blank sheets in your answer booklet for writing and drawing.*

*Work done on any paper other than that provided will receive no mark.*

*You are advised to use sharp pencils for your drawings. Do not shade or colour. Great importance is attached to the accuracy of all drawings and observations.*

FOR ALL CANDIDATES

Answer **all** the questions in this section.

1. Study specimens **A** and **B** and answer questions 1(a) to 1(e).

- (a) (i) Name the class to which specimen **B** belongs. [1 mark]  
(ii) State **two** reasons for the answer in 1(a) (i). [2 marks]
- (b) (i) Name the habitat of specimen **A**. [1 mark]  
(ii) State **one** structural feature that adapts specimen **A** to its habitat. [2 marks]
- (c) (i) In a tabular form, state **two** observable structural differences between specimens **A** and **B**. [2 marks]  
(ii) State **two** observable structural similarities between specimens **A** and **B**. [2 marks]
- (d) (i) What is the symmetry of specimen **B**? [1 mark]  
(ii) Name **one** tool **each** which could be used to collect samples of specimens **A** and **B** for scientific studies. [2 marks]  
(iii) Name **two** structures in specimen **B** that could be affected by oil spillage in its habitat. [2 marks]
- (e) Make a drawing, 6 cm to 8 cm long of the ventral view of specimen **A** and label fully. [10 marks]

2. Study specimens **D**, **G** and **H** and answer questions 2(a) to 2(e).

- (a) (i) Place **two** drops of specimen **D** on a white tile and add **two** drops of iodine solution. Copy and complete the table below, stating the test, observation and inference.

Test	Observation	Inference

[3 marks]

- (ii) Put 5 ml of specimen **D** into a test tube and add 2 ml of sodium hydroxide solution followed by **three** drops of copper (II) tetraoxosulphate (VI) and shake. Copy and complete the table below, stating the test, observation and inference.

Test	Observation	Inference

[3 marks]

- (iii) Give the name of **each** of the tests in 2(a)(i) and 2(a)(ii). [2 marks]

(b) State **two** ways by which specimen **G** is of economic importance. [2 marks]

- (c) (i) Name the kingdom to which specimen **G** belongs. [1 mark]  
(ii) State **two** reasons for the answer in 2(c)(i). [2 marks]  
(iii) Name **four** other organisms that belong to the same kingdom as specimen **G**. [4 marks]

- (d) (i) Name the Phylum to which specimen **H** belongs. [2 marks]  
 (ii) State **three** reasons for the answer in 2(d)(i). [3 marks]
- (e) (i) Explain **briefly** the role of specimen **G** in nutrient recycling. [2 marks]  
 (ii) What is the mode of nutrition of specimen **G**? [1 mark]

SECTION B  
 [30 marks]

FOR CANDIDATES IN GHANA ONLY

*Answer the questions in this section.*

3. Study specimens **J**, **K**, **L** and **M** and answer questions 3(a) to 3(g).

- (a) Classify specimen **J** into its:  
 (i) Phylum,  
 (ii) Class. [2 marks]
- (b) State **two** reasons **each** for the answers in 3(a) (i) and(ii). [4 marks]
- (c) Use arrows to indicate the relationship among specimens **J**, **K** and **L** in a cycle. [4 marks]
- (d) (i) State **two** observable characteristic features that adapt specimen **L** to its habitat. [4 marks]  
 (ii) State **two** observable structures that adapt specimen **M** to its habitat. [4 marks]
- (e) In a tabular form, state **two** observable structural differences between specimens **J** and **M**. [2 marks]
- (f) (i) Name **one** habitat **each** of specimens **J** and **M**. [2 marks]  
 (ii) State **three** ways **each** by which specimens **J** and **M** are of economic importance. [6 marks]
- (g) Classify specimen **M** into:  
 (i) Division;  
 (ii) Class. [2 marks]

SECTION C  
 [30 marks]

FOR CANDIDATES IN NIGERIA, SIERRA LEONE, THE GAMBIA AND LIBERIA

*Answer the questions in this section.*

4. Study specimens **N**, **P**, **Q**, **R**, **S** and **T** and answer questions 4(a) to 4(c).

- (a) (i) Copy and complete the table below by placing **each** of specimens **N**, **P**, **Q**, **R**, **S** and **T** under the appropriate headings

<i>Dry indehiscent fruit</i>	<i>Dry dehiscent fruit</i>	<i>Succulent Fruit</i>

[6 marks]

- (ii) Name the type of fruit to which **each** of specimens **N, P, Q, R, S** and **T** belongs. [6 marks]
- (iii) State **three** observable structural differences between specimens **S** and **T**. [3 marks]
- (b) State **two** observable features of biological importance of **each** of specimens **N, P** and **T**. [6 marks]
- (c) Make a drawing, 6 cm to 8 cm long of specimen **T** and label fully. [9 marks]

***END OF PAPER***