SC5043
WASSCE 2021
BIOLOGY 3
Practical
2 hours

3

THE WEST AFRICAN EXAMINATIONS COUNCIL

West African Senior School Certificate Examination
for School Candidates

SC 2021 — BIOLOGY 3 — 2 hours

PRACTICAL

[30 marks]

INSTRUCTIONS TO CANDIDATES

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

Answer **all** *the questions in Section* **A** *and all the questions in the section peculiar to your country.*

No marks *will be awarded for answering questions* **not peculiar** *to your country.*

Use **2B** *pencil to draw where necessary.*

Write your answers in the spaces provided in the question paper.

Write in the space provided below, the **QUESTION NUMBER OF THE QUESTIONS YOU HAVE ANSWERED** *in the order in which you have answered them.*

For Examiner's Use Only	
Question Number	**Mark**
Total	

Do not write in this margin.

Section A

[50 marks]

For All Candidates

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

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

(a) Name the class of specimen **A**.

_____

[1 mark]

(b) State **four** observable features of the Class named in **1***(a)*.

_____

_____

_____

_____

[4 marks]

(c) Name **two** other members of the Class mentioned in **1***(a)*. ***ggghhh***

_____

_____

[2 marks]

(d) Describe **briefly** how the limbs of specimen **A** are adapted for movement:

(i) on land;

_____

_____

_____

[4 marks]

(ii) in water;

_____

_____

_____

ggghhh [4 marks]

Candidate's Name:.....

Do not write in this margin.

(e) Make a drawing, 8 *cm* to 10 *cm* long, of the lateral view of specimen **A** and label fully.

[10 marks]

ggghhh

2. Beakers **C**, **D**, **E** and **F** contain seeds that have been sown for seven days. Carefully remove **one** seed/seedling from **each** of the beakers labelled **C**, **D**, **E** and **F** and place **each** on the corresponding white tile labelled **C**, **D**, **E** and **F**. *Study them and answer questions* **2***(a) to* **2***(c).*

(a) Observe the soils and seed/seedling then record the observation and result on the table below.

Soil/seed/seedling in beaker	**Two** *observations*	*Result*
C		
D		
E		
F		

ggghhh

[12 marks]

Do not write in this margin.

(b) (i) Name **one** condition for germination that was **likely** absent in the beakers labelled **D**, **E** *and* **F**.

D: _____

E: _____

F: _____

[3 marks]

ggghhh

(ii) Give **two** reasons for the result in beaker **C**.

_____

_____

[2 marks]

(c) Make a drawing, 8 *cm* to 10 *cm* long of **one** seed/seedling obtained from the beaker labelled **C** and label fully.

[8 marks]

ggghhh

Candidate's Name:.....

Do not write in this margin.

SECTION B

[30 marks]

FOR CANDIDATES IN GHANA ONLY

ggghhh

Answer the questions in this section.

3. *Study specimens* **G**, **H** *and* **J** *and answer questions* **3***(a) to* **3***(f).*

(a) (i) Describe the stem of specimen **G**.

[4 marks]

(ii) State **two** ways by which specimen **G** is of biological significance.

ggghhh

[2 marks]

(b) Explain **briefly** how specimen **H** survives a fire outbreak.

[4 marks]

(c) Explain **briefly** how **three** features of specimen **J** enable it to survive drought.

[6 marks]

(d) (i) Name **one** habitat of specimens **G** and **J**.

[1 mark]

ggghhh

(ii) List **three** abiotic factors in the habitat of specimen **J**.

ggghhh

[3 marks]

(e) In the table below, state **three** observable differences **each** between specimens:

(i) **H** and **J**;

H	**J**

[3 marks]

ggghhh

(ii) **J** and **K**.

J	**K**

[3 marks]

(f) State **two** observable similarities **each** between specimens:

(i) **H** and **J**;

[2 marks]

(ii) **J** and **K**.

[2 marks]

ggghhh

Do not write in this margin.

Candidate's Name:.....

Do not write in this margin.

SECTION C

[30 marks]

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

Answer the questions in this section.

4. *Study specimens* **K** *and* **L** *and answer questions* **4***(a) to* **4***(e).* ggghhh

(a) Classify **each** of specimens **K** and **L** into its:

(i) Phylum;

K: _____

L: _____

[2 marks]

(ii) Class.

K: _____

L: _____

[2 marks]

(b) (i) State **three** observable features of members of the Class of specimen **K**.

_____

_____

_____

[3 marks]

(ii) Name **three** other Classes of the Phylum to which specimen **K** belongs.

ggghhh

_____

_____

_____

[3 marks]

(c) (i) State **two** ways **each** by which specimens **K** and **L** are of economic importance.

K: _____

_____

L: _____

_____

[4 marks]

(ii) State **five** ways by which specimen **K** can be controlled.

_____

_____

_____

_____

ggghhh _____

[5 marks]

Do not write in this margin.

(d) (i) State **five** observable differences between specimens **K** and **L**.

K	L

ggghhh

[5 marks]

(ii) State **four** observable similarities between specimens **K** and **L**.

_____

_____

_____

_____

ggghhh

[4 marks]

(e) Name **one** habitat **each** of specimens **K** and **L**.

K: _____

L: _____

[2 marks]

END OF PAPER