

231/3

– **BIOLOGY** –
(PRACTICAL)

Paper 3



Apr. 2021 – 1¾ hours

Name Index Number

Candidate's Signature Date

Instructions to Candidates

- (a) Write your name and index number in the spaces provided above.
- (b) Sign and write the date of examination in the spaces provided above.
- (c) Answer **all** the questions in the spaces provided.
- (d) You are required to spend the first 15 minutes of the 1¾ hours allowed for this paper reading the whole paper carefully before commencing your work.
- (e) Additional pages must not be inserted.
- (f) **This paper consists of 7 printed pages.**
- (g) **Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.**
- (h) **Candidates should answer the questions in English.**

For Examiner's Use Only

Question	Maximum Score	Candidate's Score
1	13	
2	14	
3	13	
Total Score	40	



1. You are provided with a piece of specimen N and the following reagents:

- Dilute hydrochloric acid
- Dilute sodium hydroxide
- Dilute hydrogen peroxide
- Water

You have also been provided with the following apparatus:

- Three test tubes
- 10 ml measuring cylinder
- Scalpel

Procedure

- (i) Label the test tubes **1**, **2** and **3**.
 - (ii) Macerate (chop into tiny pieces) half of specimen N.
 - (iii) Place equal amounts of the macerated specimen into test tubes **1** and **2**.
 - (iv) Cut the remaining half of the specimen into two equal pieces.
 - (v) Place one piece into test tube **3** and reserve the remaining piece.
 - (vi) Add about 2 cm³ of dilute hydrochloric acid into test tube **1**, add about 2 cm³ of sodium hydroxide into each of test tubes **2** and **3**.
 - (vii) Add about 5 cm³ of hydrogen peroxide into each of the three test tubes, **1**, **2** and **3**.
- (a) Observe the amount of effervescence in each test tube and complete the table below.

Test tube	Contents	Amount of effervescence observed	Explanation
1			
2			
3			

(10 marks)



- (b) Use the reagents provided to test for the food substance present in the piece of specimen N reserved from (a). Observe and record in the table below.

Procedure	Observation	Conclusion

(3 marks)

check www.freekcsepastpapers.com for free learning material

2. You are provided with photographs E, F, K and H, together with specimens G, J, L and M.



E



K



F



H

Using observable features in the photographs and specimens provided:

(a) Place with a reason, each of the following organisms in their respective Kingdom, Division or Phylum.

(i) G (2 marks)

Division

Reason

(ii) E (2 marks)

Kingdom

Reason

(iii) M (2 marks)

Division

Reason

663

A513



(iv) **H** (2 marks)
Phylum
Reason

(b) State *two* features in the following organisms that make them to be placed in different Classes:

(i) **F and K** (2 marks)
.....
.....
.....

(ii) **J and M** (2 marks)
.....
.....
.....

(c) Make a labelled diagram of specimen **L**. (1 mark)

check www.freekcsepapers.com for free learning material

(d) Explain the difference in the mode of reproduction exhibited by **E** and **J**. (1 mark)
.....
.....
.....

3. You are provided with a specimen labelled **P** on a tile.

(a) (i) Name the Class to which the specimen belongs. (1 mark)

.....

(ii) Give **three** reasons for your answer in (a)(i) above. (3 marks)

.....

.....

.....

(b) State **three** ways by which the organism is adapted to movement in its habitat. (3 marks)

.....

.....

.....

.....

.....

.....

(c) State **two** functions of the part labelled **Q**. (2 marks)

.....

.....

.....

.....

683

A513

check www.freejsepapers.com for free learning material



(d) Carefully lift the part labelled **Q** and observe the underlying structure.

(i) State the *main* function of the underlying structure observed. (1 mark)

.....
.....

(ii) State *three* ways by which the structure is adapted to its function. (3 marks)

.....
.....
.....
.....
.....
.....
.....

check www.freekcsepastpapers.com for free learning material

THIS IS THE LAST PRINTED PAGE.

683

A513

BLANK PAGE

check www.freekcepastpapers.com for free learning material

