EXAMINATIONS COUNCIL OF ZAMBIA
Examination for School Certificate Ordinary Level

Biology
PAPER 2 Theory

OCTOBER 2015

Time: 1 hour 45 minutes

Instructions To Candidates

Write your name, centre number and candidate number in the spaces at the top of this page and on the Answer Booklet used.
There are ten questions in this paper.

Section A

Answer all questions.

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

Section B

Answer any three questions.

Write your answers in the Answer Booklet provided.

At the end of the examination:

1. Fasten the Answer Booklet used securely to the question paper.
2. Enter the numbers of the Section B questions you have answered in the grid on the bottom right side corner.

Information for candidates

The number of marks is given in brackets [ ] at the end of each question or part question.

You are advised to spend no longer than one hour on Section A and no longer than 45 minutes on Section B.

Cell phones are not allowed in the examination room.

www.zedpastpapers.com

This question paper consists of 7 printed pages.
Section A [44 marks]

Answer all the question in the spaces provided on the question paper.

1. **Figure 1.1** shows three different types of organisms labelled A, B and C.

(a) (i) Identify the three organisms shown in **Figure 1.1** above.

A is ..............................................................................................................

B is ..............................................................................................................

C is .............................................................................................................. [2]

(ii) Classify the organisms identified in (a) (i) above according to their kingdoms.

A ..............................................................................................................

B ..............................................................................................................

C .............................................................................................................. [3]

(b) (i) State two organisms which might bring about decay of organic matter.

1 ..............................................................................................................

2 .............................................................................................................. [2]

(ii) Name one disease caused by organism A.

.............................................................................................................. [1]

[Total: 9]

www.zedpastpapers.com
Figure 2.1 shows the structure of a mammalian sperm.

![Diagram of a mammalian sperm with labels D, E, and F.]

Figure 2.1

(a) (i) Identify the parts labelled D and E.

D ........................................................................................................ [2]
E ........................................................................................................ [2]

(ii) Explain the function of the part labelled F.

........................................................................................................ [1]

(b) What substance produced by the cervix enable the sperm to swim in the female reproductive tract?

........................................................................................................ [1]

(c) (i) Explain why only one sperm fertilises the ovum.

........................................................................................................ [2]
........................................................................................................ [2]

(ii) Distinguish between a sperm and an ovum.

........................................................................................................ [2]
........................................................................................................ [2]

[Total: 9]
3 Figure 3.1 shows the life cycle of a housefly.

![Figure 3.1]

**Figure 3.1**

(a) (i) Identify the stages labelled G and H.

G ........................................................................................................ [1]

H ........................................................................................................ [1]

(ii) Explain the changes taking place during stage I.

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

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

........................................................................................................ [3]

(b) (i) Which stage in Figure 3.1 would be the most effective for eradicating houseflies?

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

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

........................................................................................................ [3]

(ii) Using a named example, describe the role of a housefly in disease transmission.

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

........................................................................................................ [1]

[Total: 9]
**Figure 4.1** shows the growth of mucor on nshima.

![Figure 4.1](image)

(a) (i) Identify structure J in **Figure 4.1**

(ii) Explain how structure K obtains nutrients from the nshima.

(b) The nshima was flooded with iodine solution. State colour changes that would occur.

(i) at L

(ii) at M

(c) Give reasons for the colour changes observed in (b) above.

[Total: 9]

[Turn over]
5 (a) State **one** sex linked disease

................................................................................................................ [1]

(b) What is meant by the term **sex-linked characteristics**?

..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
.......................................................................................................................... [3]

(c) Using a genetic diagram and appropriate symbols, explain how a man with normal eye sight married to a woman who is a carrier of the trait for colour blindness can have a child who is colour blind.

[2]

[Total: 9]

www.zedpastpapers.com
Section B [30 marks]

Answer any three questions

6  (a)   Explain the term homeostasis [2]
        (b)   Discuss the role of the liver in homeostasis. [10]
         [Total: 12]

7  (a)   Describe the process of seed germination. [9]
        (b)   Explain how auxins affect the growth of shoots. [3]
         [Total: 12]

8  (a)   Explain the term respiration. [2]
        (b)   Distinguish gaseous exchange in fish and insects. [4]
        (c)   Explain how the alveolus is adaptation for gaseous exchange. [6]
         [Total: 12]

9  (a)   Explain what is meant by double circulation in humans? [2]
        (b)   Distinguish between the two parts of the double circulation. [3]
        (c)   Discuss the transport functions of blood. [7]
         [Total: 12]

10 (a)  Explain the following terms: [2]
        (i)   Community
        (ii)  Habitat
        (iii) Niche [6]
        (b)   Describe the role of producers, consumers and decomposes within an ecosystem. [6]
         [Total: 12]
DOWNLOAD ECZ PAST PAPERS FROM YOUR PHONE OR PC www.zedpastpapers.com