**Name ……………………………..………...…………. Index No……………………….….………….**

**School ………………………………………………... Candidate’s Signature ……………………… Date ………………...........................………..**

**231/3**

**BIOLOGY**

**PAPER 3**

**(PRACTICAL)**

**TIME: 13/4 HOURS**

**INSTRUCTIONS TO CANDIDATES**

1. Write your name and index number in the spaces provided above
2. Answer **ALL** the questions in spaces provided.
3. You are required to spend the first 15 minutes of the 1 hours allowed for this paper reading the whole paper carefully before commencing your work.

**FOR EXAMINER’S USE ONLY**

|  |  |  |
| --- | --- | --- |
| **Question** | **Max. Score** | **Candidate’s score** |
| **1** | 13 |  |
| **2** | 14 |  |
| **3** | 13 |  |
| **40****TOTAL SCORE**  |  |

***This paper consists of 6 printed pages.***

***Candidates should check to ensure that all pages are printed as indicated and no questions are missing.***

1. Examine photographs P and M showing the two mammals and their skull (not drawn to scale).



**M**

**I**

**P**

a) Giving reasons state the diet of the animals shown in the photographs.

P (1 mark)

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Reason (2 marks)

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…………………………………………………………………………………………………………….

M (1 mark)

…………………………………………………………………………………………………………….

Reasons (2 marks)

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b) Label the teeth labelled C and I in photographs P and M respectively. (2 marks)

C ..……………………………………………………………………………………………………….

I …………………………………………………………………………………………………………

c) State **one** adaptation of the muscles labelled in photograph P to its mode of feeding. (1 mark)

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d)i) Name the gap between teeth I and premolar teeth in the photograph M. (1 mark)

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ii) State the importance of the gap named above. (1 mark)

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e) State **one** common characteristics that would make the above two animals to co-exist in the same environment. Though one is a predator and the other its prey. (2 marks)

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2. Photographs G, R, I, S and T are plant organs. Photographs S and T show an association with insects. Study them carefully.



**B**

**C**

**D**

**A**

**G**

**I**



**Insect**

**T**

**Insect**

**S**



a) Name the type of response shown in photographs G, I and S. (3 marks)

G ………………………………………………

I ………………………………………………

S ………………………………………………

b) State the importance of the insects found in the photographs S and T to the plants. (2 marks)

S

…………………………………………………………………………………………………………….

T

…………………………………………………………………………………………………………….

c) Label the parts labelled A, B, C and D in photograph R. (4 marks)

A……………………………………………………

B……………………………………………………

C……………………………………………………

D……………………………………………………

d) Describe the type of ovary shown by specimen R. (1 mark)

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e) Briefly explain how the process shown in photograph G is accomplished. (4 marks)

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3. You are provided with a solution labelled X in solution form iodine solution, DCPIP and benedicts solution. Carry out test on the solution X to identify the type of food substances present. (9 marks)

a)

|  |  |  |  |
| --- | --- | --- | --- |
| Food being tested | Procedure | Observation | Conclusion |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

b) i) State the fate of the food substances identified in solution X in mammals. (2 marks)

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ii) Name the process in plants that leads to formation of the food substances present in solution X. (1 mark)

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c) Name the hormone that regulate the amount of food substances present in solution X in a human blood. (1 mark)

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