**NAME\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_INDEX NO.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**DATE\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_SIGNATURE\_\_\_\_\_\_\_\_**

**ADM NO.\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**INSTRUCTIONS TO CANDIDATES:**

* *Write your* ***name*** *and* ***index number*** *in the spaces provided.*
* *Sign and write* ***date*** *of examination in the spaces provided above*
* *Answer* ***all*** *the questions in the spaces provided.*

***For Examiner’s Use Only:***

|  |  |  |
| --- | --- | --- |
| **QUESTIONS** | **MAXIMUM SCORE** | **CANDIDATES SCORE** |
| 1 | 16 |  |
| 2 | 12 |  |
| 3 | 12 |  |
| **TOTAL**  |  **40** |  |

1. You are provided with two specimens K1 and K2. The two specimens are similar except that they are at different stages of development.
2. i) Name the plant part represented by the specimens. **(1 mark)**

 ii) Give one reason for your answer. **(1 mark)**

1. i) State two differences between K1 and K2. **(2 marks)**

 ii) Name the hormone responsible for the differences in b(i) above. **(1mark)**

1. Cut a 20mm disc of K2 and place it in a pestle. Chop it into pieces and add 100ml of distilled water. Continue crushing and add a further 5ml of distilled water. Using a strainer, filter off the solution and label the filtrate as solution K2**. (8 marks)**

|  |  |  |  |
| --- | --- | --- | --- |
| FOOD SUBSTRATE | PROCEDURE | OBSERVATIONS | CONCLUSION |
|  |  |  |  |
|  |  |  |  |

1. Cut a 20mm disc of K1 and observe the transverse section. Draw the transverse section of K1 and label the parts**. (3mks)**
2. You are provided with specimen X, Y and Z obtained from a mammal. Examine them
3. Giving reasons, identify each of the specimens. (6 mks)

**X**

Reason

**Y**

Reason

**Z**

Reason

1. Draw a diagram showing how specimens X, Y and Z articulate. (3 mks)

 c) Describe how specimen **Z** is adapted to its functions. (4 mk)

1. The photograph below shows the longitudinal section of the heart. Study it and answer the questios that follow.



1. Use letters A, B and C to identify and label on the diagram the parts that perform the following functions. (3mks)

|  |  |
| --- | --- |
| A | Transport deoxygenated blood from the lower parts of the body to the heart. |
| B | Transports oxygenated blood from the heart to other parts of the body. |
| C | Transports oxygenated blood to from lungs to the heat. |

1. (i) Idntify and label on the diagram the following parts. (3mks)

 Tendons

 Septum

 Thick muscles on the left ventricle

 (ii) How do the parts identified in b(i) above adapt the heart to its function (3mks)

1. State two defects of the circulatory system. (2mks)