** MARANDA HIGH SCHOOL**

**Kenya Certificate of Secondary Education**

**MOCK EXAMINATIONS 2022**

**231/3 Biology Practical Paper 3**

**September, 2022 Time: 1Hour 45 Mins**

**Name**: ………………………………………….…….…… **Adm** **No**: ………………

**Class**: ………………**Candidate’s** **Signature**: ………..…….. **Date: 12th September, 2022**

**Time: 11.00AM -12.45 PM**

***Instructions to candidates:***

1. *Write your* ***name*** *and* ***admission number*** *in the spaces provided.*
2. *Sign and write* ***date*** *of examination in the spaces provided above*
3. *Answer* ***all*** *the questions in this paper.*
4. *You are required to spend the first 15 minutes of the 1¾ hours allowed for this paper reading the whole paper carefully.*
5. *This paper consists of* ***11*** *Printed pages.*
6. *Candidates should check the question paper to ensure that all the papers are printed as indicated and no questions are missing.*

**For Examiner’s Use only**

|  |  |  |
| --- | --- | --- |
| **QUESTIONS** | **MAXIMUM SCORE** | **CANDIDATE’S SCORE** |
| 1 | 17 |  |
| 2 | 11 |  |
| 3 | 12 |  |
| **TOTAL** | **40** |  |

1. You are provided with **Specimen K** .Carefully cut a transverse section through specimen **K** using a scalpel provided.
2. (i) By observing one of the two halves of specimen **K**, Give **two** reasons to prove that specimen **K** has **axile** placentation (2marks) ……………………………………………………………………………………………………………………………………………………………………………………………………………………

(ii) Squeeze some juice from **specimen K** into 100ml beaker provided and label it as **juice K.** Using a portion of **juice K**, carry out the food test using the reagents provided and complete the table below. (**NB** **preserve the remaining portion of juice K for use in question 2 )** (8marks)

|  |  |  |  |
| --- | --- | --- | --- |
| **Food substance** | **Procedure** | **Observation** | **Conclusion** |
|  |  |  |  |
|  |  |  |  |

(iii) Name the **deficiency** disease that results fromlack of the food substance present in juice **K.**

(1mark)

…………………………………………………………………………………………………………

(iv) Highlight **two** symptoms of the disease named in **(a) (iii)** above (2marks)

……………………………………………………………………………………………………………………………………………………………………………………………………………………

1. Put **2cm3** of liquid labeled **C** into a test tube. Draw some of the juice from specimen **K** into a dropper. Add 4 drops of the juice into the test tube with solution ***C*** and shake.

(i) State your observation. (1mark)

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

(ii) Statethe part of the human body where the process demonstrated above occurs and the enzyme that carries out the process.

**Part of body**…………..………………………………………………………………………. (1mark)

**Enzyme**…………...…………………………………………………………………………… (1mark) (iii) Which gland produces the enzyme stated in (a) (ii) above? (1mark)

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

1. (a) Take a small amount of substance **B** provided and add to it **2cm3** of sodium hydrogen carbonate solution.

(i) Stateyour observations (1mark)

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

(ii) Whichproces*s* in the body is illustrated above? (1mark)

…………………………………………………………………………………………………………

(iii) State the part of the body where the above process takes place (1mark)

…………………………………………………………………………………………………………

(iv) State **two** functions of substance **B** in the body (2marks)

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(v) Name **two** diseases of the circulatory system caused by excess cholesterol in food. (2marks)

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1. Study the photographs below depicting plants growing in different habitats. Use them to answer the questions that follow.



(i) Identify the habitats in which they are found (2marks)

**Y** ………………………………………………………………………………………………………

**Z**………………………………………………………………………………………………………

(ii) State the significance of the following structures found in the specimens shown above. (2marks)

**R** ………………………………………………………………………………………………………

**S**………………………………………………………………………………………………………..

1. (a) Below are photographs of **Venus flytrap** (an insectivorous plant). Study them and answer the questions that follow.

A B C



**Sensitive hairs**

**Trapped insect**

**Spines**

(i) Name **one** major nutrient that is **deficient** in the soil where the above plant grows. (1mark)

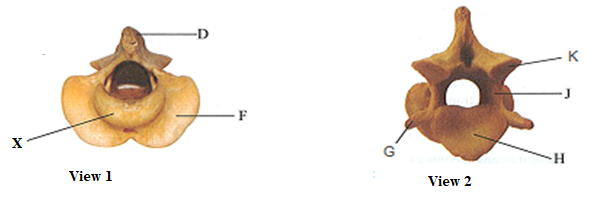
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(ii) Name the type of response shown by photograph **C** (1mark)

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

(iii) Describe how the above plant traps the insect (4marks)

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

1.  The photographs below are of the same mammalian vertebra showing two views of the same bone. Examine them carefully.

(i) Identify the vertebra……………………………………………………………………….. (1mark)

(ii) Name the region from which the vertebra is obtained. (1mark)

…………………………………………………………………………………………………………

(ii) Name the part marked X (1mark) …………………………………………………………………………………………………………

(iv) State the function of part X (1mark)

…………………………………………………………………………………………………………

1. State the functional difference between a tendon and a ligament (1mark)

……………………………………………………………………………………………………………………………………………………………………………………………………………………

1. Name the bone that articulate with this vertebra at the distal end (1mark)

…………………………………………………………………………………………………………

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