**NAME: ………………………………………………………………………ADM NO: ….......**

**SCHOOL: ……..……………………………………………………………….DATE: …………**

**CANDIDATE’S SIGNATURE…………………..**

ASUMBI GIRLS HIGH SCHOOL

PRE-MOCK

MAY-JUNE

2022

***Kenya Certificate of Secondary Education (K.C.S.E.***

**BIOLOGY PAPER THREE 231/3**

**TIME 1HOUR 45 MINUTES**

**INSTRUCTIONS TO CANDIDATES**

1. ***Write, index number and admission number in the spaces provided at the top of this page.***
2. ***Sign and write the date of examination in the spaces provided above.***
3. ***Answer ALL the questions.***
4. ***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.***
5. ***Answers MUST be written in the spaces provided in this question paper.***
6. ***Additional pages MUST NOT be inserted.***
7. ***This paper consists of five (5) printed pages.***
8. ***Check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.***

**FOR EXAMINERS USE ONLY**

|  |  |  |
| --- | --- | --- |
| **Question** | **Maximum Score** | **Candidate’s Score** |
| **1** | **13** |  |
| **2** | **11** |  |
| **3** | **16** |  |

1. You are provided with **Specimen K** .Carefully cut a transverse section through specimen **K** using a scalpel provided.

1. (i) By observing one of the two halves of specimen **K**, Give **two** reasons to **prove** that specimen **K** has **axile** placentation (2mks)

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…………………………………………………………………………………………….

(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.)** **(8mks**)

|  |  |  |  |
| --- | --- | --- | --- |
| Food substance | Procedure | Observation | conclusion |
|  |  |  |  |
|  |  |  |  |

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

(1mk)

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

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

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**2**. Put **2cm3** of liquid labelled **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.

**(a)** (i) State your observation. (1mk)

……………………………………………………………………………………………

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

Part of body…………………………………………………………………………..……. (1mk)

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

…………………………………………………………………………………………………

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

(i) **State**your observations (1mk)

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

(ii) Which**proces*s*** in the body is illustrated above? (1mk)

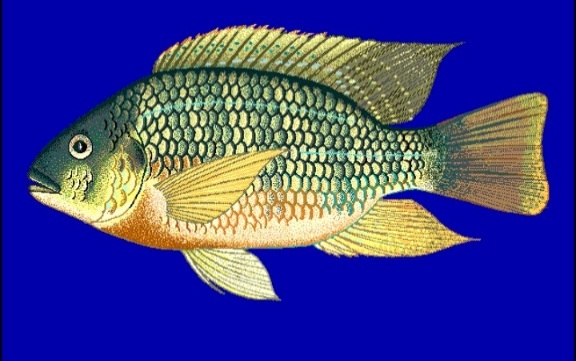
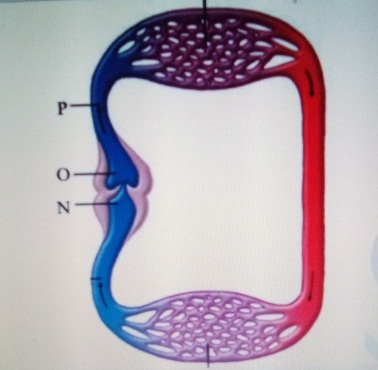
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(iii) **State** the part of **the body** where the above process takes place (1mk)

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

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

3. **(A)** photograph **J** shows the circulatory system of organism represented by photograph **G**.



**M**

**J G**

Systemic circulation

(i) Giving **two** reasons to your answer name the **class** to which specimen **G** belongs.

Class…………………………..……………………………………………….. (1mk)

Reasons………………………………………………………………………… (2mk)

……………………………………………………………………………….

……………………………………………………………………………….

(ii) Name the part labelled: M…………………………………………….………….. (1mk)

N………………………………………………..…….…. (1mk)

O ……………………………………………….……..… (1mk)

(iii) Giving **one** reason to your answer state the type of **closed** circulatory system shown by photograph **J**

Type of circulatory system…………………………………………………………..… (1mk)

Reason……………………………………………………………………………….….(1mk)

(iv) State two features of specimen **G** that enhances its **streamlined** shape (2mks)

………………………………………………………………………………………

……………………………………………………………………………………..

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

A B C



**Trapped insect**

**Spines**

**Sensitive hairs**

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

…………………………………………………………………………………………………

(ii) Name the type of response shown by plate **C** (1mk)

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

(iii) **Describe** how the above plant **trap** the insect (4mks)

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