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

**231/3**

**BIOLOGY**

**PAPER 3 (PRACTICAL)**

**FORM THREE**

**END OF TERM I YEAR 2022**

**INSTRUCTIONS TO CANDIDATES:**

1. You are provided with food substance labeled solution G. The reagent provided are Iodine solution, Benedicts solution, 2M HCl acid, 10% Sodium hydroxide solution Copper (II) sulphate and 10-% Sodium hydroxide solution.

(a) Perform food tests and fill in the table below. (12 mks)

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

(b) (i) Name the enzyme responsible for digestion of food substance present in G in two named

regions of the human alimentary canal. (2 mks)

(ii) Name three deficiency diseases in children that may result from lack of one of the food

substances in G. (1 mk)

2. Study the kidney diagrams below.



1. (i) Name the parts labeled **A**, **B**, **C** and **D** in figure **1**. (4 marks)

(ii) Name the processes that take place in the parts labeled. **V and W** (2 marks)

(b) State **two** adaptations of the part labeled **W**. (2 marks)

(c) On the diagram name the part where counter current flow occurs. (1 mark)

(d) State **two** homeostatic functions of the diagram above. (2 marks)

(e) Explain what will happen to the process of urine formation in absence of vasopressin hormone. (4 marks)

3. The photographs on the leaf attached are of animals belonging to the same taxonomic unit (class).



a) i) Name the class to which the organisms in the photographs belong. (1mk)

ii) State three reasons for your answer in a) (i) above. (3mks)

b) State three economic importance of organisms in this class. (3mks)

c) Use the following characteristics to prepare a two step dichotomous key of the animals in the photographs. (4mks)