Name: ……………………………………………………………………..Index No: …………………………………..

*P530/2*

*Biology*

*Paper 2*

*June/July 2022*

*2½hours*

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***🖎***

**Community**

UNNASE MOCK EXAMINATIONS 2O22

Uganda Advanced Certificate of Education

BIOLOGY

PAPER 2

***INSTRUCTIONS TO CANDIDATES***

* *Answer number* ***one*** *in section A and any* ***three*** *numbers in section* ***B****.*

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| --- | --- |
| **NO.** | **MARKS** |
| SECTION A |  |
| SECTION B |  |

***Turn over***

**SECTION A**

1. In the study of cardiac cycle in man, the variation in ventricular pressure (VP), Aortic pressure (AP) and Atrial pressure (AtP) was recorded. The pressure variations with time were plotted on the graph as shown in **figure 1** below.

Study the graphs carefully and answer the questions that follow

**Figure 1**

a(i) Describe the change in ventricular pressure in a single heart beat. (*6marks*)

(ii) Explain the changes in ventricular pressure described above in a (i) above. (*6marks*)

(iii) Explain the significance of the changes in ventricular pressure between 0.15 to 0.5 seconds. (*5marks*)

(b) Compare the changes in ventricular pressure and Aortic pressure. (*8marks*)

(c)(i) From the graph, explain the events that maintain unidirectional flow of blood in the cardiac cycle. (*10marks*)

(ii) Describe the effect of increased level of ADH to the rate of heart beat. (*5marks*)

**SECTION B**

2(a) With examples, state how animals are adapted to locomotion on land. (*5marks*)

(b) With a diagram, describe amoeboid locomotion in amoeba. (*10marks*)

(c) Describe the events leading to relaxation of skeletal muscles. (*5marks*)

3(a) What is biodiversity? (*3marks*)

(b) Explain the effect of decreasing Biodiversity to ecosystem. (*8marks*)

(c)(i) Describe how high predation pressure may lead to evolution of predation-resistant prey. (*6marks*)

(ii) What is the effect of stable climatic factors to Biodiversity? (*4marks*)

4(a) Describe how nervous reflex action stimulates structural mechanisms of regulating human body temperature in cold weather. (*10marks*)

(b) Describe how human ear brings about body balance. (*10marks*)

5(a) What are the characteristics of non cyclic photophosphorylation? (*5marks*)

(b) Explain the high rate of carbondioxide fixation in monocotyledonous plants on a sunny day. (*10marks*)

(c) Explain why plants under canopy have a short compensation period. (*5marks*)

6(a) Compare oogenesis to spermatogenesis. (*10marks*)

(b) Explain the changes that occur in foetal circulation immediately after birth. (*10marks*)

**END**