Candidate's Name……

School Name……

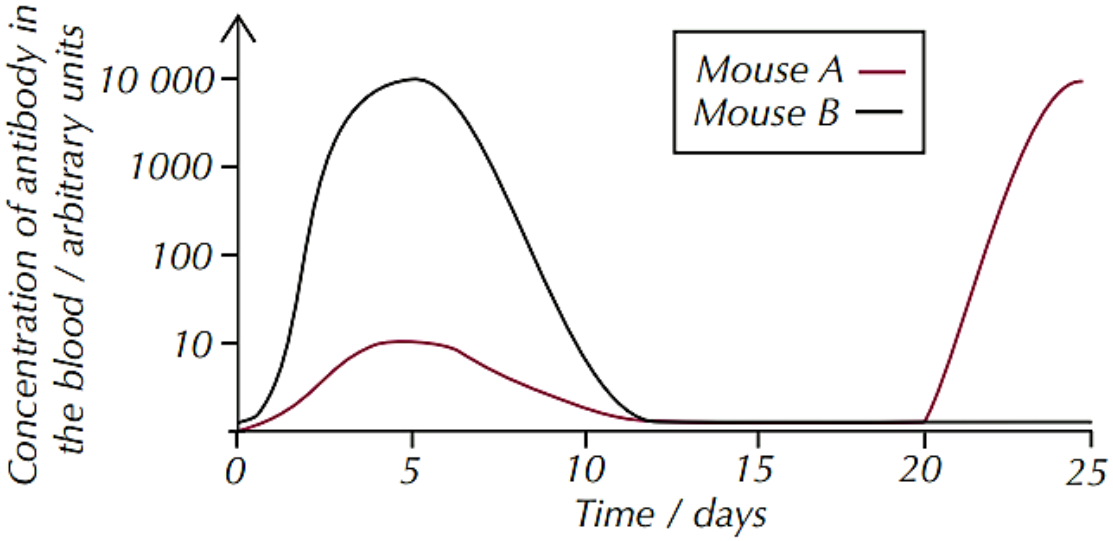
BIOLOGY
PAPER 2
P530/2
SENIOR
SIX

INITIATIVE FOR BIOLOGY TRANSFORMATION (I.B.T)
UACE BIOLOGY
SENIOR SIX
RESOURCEFUL MOCK.
PAPER 2
2 HOURS AND 30 MINUTES

INSTRUCTIONS TO THE CANDIDATES

This paper consists of section A and B.
Answer question one in section A plus 3 questions in section B
Candidates are advised to read questions carefully, organize their answers and present them precisely and logically, illustrating with well labelled diagrams wherever necessary.

The graph below shows the immune responses of two mice exposed to a pathogen. Both mice were exposed on day 0 of the experiment. Study the curves below to answer questions that follow.



a) Compare the antibody concentrations in the two mice after exposure to the pathogen. (05 marks)

b) (i) Account for the differences in the concentration of antibodies in the two mice for the first 20 days following exposure. (12 marks)
(ii) Account for the variation in antibody concentration after the first 20days of exposure in mouse A (05 marks)

c) From the graph above, suggest with reasons.
(i) Mouse that spreads the disease to other mice during first exposure with the pathogen. (05 marks)
(ii)Beyond 10days, why antibody concentration decreases for both mice. (03 marks)

d) Using the knowledge from the graph, explain how the above information can be employed by humans to increase their longevity. (07 marks)

e) Illustrate how mutations are basis for immunity defectiveness in human beings. (03 marks)

SECTION **B**

2 a) Describe how the nephron performs the following functions during urine formation in Man.

(i) Selective reabsorption of Glucose. (05 marks)
(ii) Regulation of Blood Potential of hydrogen. (05 marks)

b) Explain the attempts of the

(i) Ectotherms to regulate body temperature. (07 marks)

(ii) Mammals in Cold waters to conserve heat. (03 marks)

3 a) What is meant by adaptive radiation? (03 marks)

b) Describe the role of the following in speciation.

(i) Polyploidy (07 marks)

(ii) Isolation (07 marks)

(iii) Mutations. (03 marks)

4a) Explain the Functions of the following in photosynthesis.

(i) Lamellae
(ii) Photophosphorylation
(iii) Water (07 marks)

b) Describe the following evidences that show photosynthesis is a double stage reaction.

(i) Intermittent light supply

(ii) Temperature Co-efficient. (07 marks)

c) Outline the significance of leaf Unfolding in relation to photosynthesis. (06 marks)

5a) How does photoperiods play role in the following

(i) Flowering (07 marks)
(ii) Dormancy in plants (05 marks)
(iii) Breeding behaviour in animals? (05 marks)

b) Explain role of gibberellins in germination of seeds. (03 marks)

6a) Describe the classification of covering epithelia basing on.

(i) Cell arrangement (03 marks)
(ii) Cell shapes (07 marks)

b)(i) Explain the adaptations of the xylem to the diurnal changes in diameter. (05 marks)

(ii)Suggest the role of secondary growth in the plant life (05 marks)

END

-Success to all s.6 Candidates- Meticulousness will change your trajectory to a positive one. Harness and tap into your innate abilities.