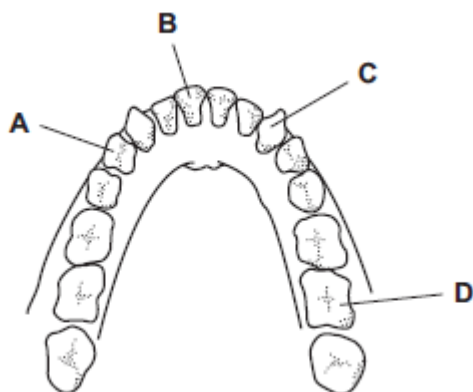


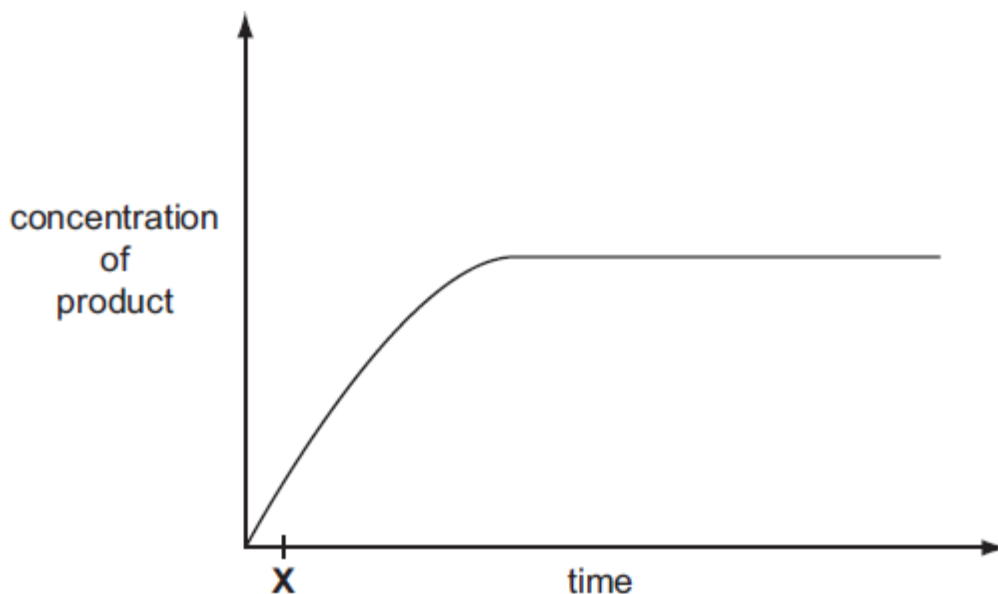
# KING'S COLLEGE, BUDO BIOLOGY DEPARTMENT

## HOME ASSIGNMENT

- Name the type of teeth labeled A, B and C
  - How is tooth D adapted to its role?



- The graph below shows the course of an enzyme-catalysed reaction at 30°C.



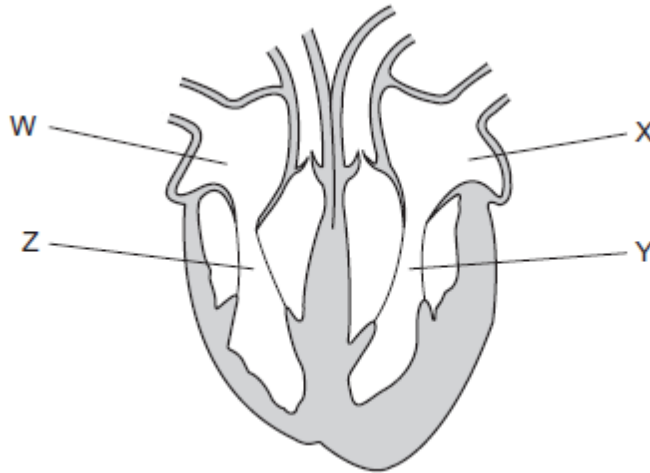
- Why are enzymes important in physiological (biological) processes in the body?
- Explain the variation of the rate of reaction with time as shown in the graph above.
- Suggest the possible reasons why the enzyme rate of reaction levels off after sometime.

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3. a. Briefly describe three factors that affect the rate of transpiration (4½marks)
- b. Give three adaptations of the root hair cell to its function (3marks)
- c. With the aid of a labeled diagram, describe an experiment to demonstrate root pressure in a plant. (7½marks)
4. Explain how the following terms differ;
- i. Plasmolysis and Turgidity (3marks)
- ii. Crenation and Haemolysis (3marks)
- b. Explain three factors affecting the rate of diffusion (3marks)
- c. How are the following tissues adapted to their functions?
- i. Phloem (3marks)
- ii. Xylem (3marks)
5. a. Mention any two ways in which the following blood vessels are adapted to their functions
- i. Veins (2marks)
- ii. Arteries (2marks)
- iii. Capillaries (2marks)
- b. Describe the mechanisms involved in a single complete cardiac cycle. (9marks)

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6. The diagram below shows the structure of the human heart



- (i) Name parts W, X, Y and Z (4 marks)
- (ii) Describe the structural adaptations of the mammalian heart to its functions(4 marks)
- (iii) Why is the mechanism of blood flow in man superior to that in a fish? (2 marks)

- 7. a) What is lymph? (1mark)
- b) Briefly describe how tissue fluid is formed? (3 marks)
- c) Mention three processes that aid in the flow of lymph (3 mark)

- 8. Which blood vessels link the following parts of the body? (2 marks)
  - i. Gut and liver
  - ii. Aorta and the kidneys
  - iii.Lungs and the heart
  - iv.Aorta and the liver