

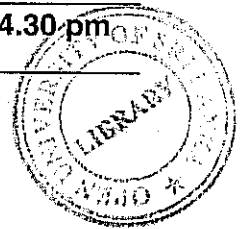


THE OPEN UNIVERSITY OF SRI LANKA
B.Sc DEGREE PROGRAMME
ZOOLOGY- LEVEL 4
FINAL EXAMINATION -2008/09
COURSE CODE – ZOU- 2264
COURSE TITLE – ANIMAL FORM AND FUNCTION –PAPER II
DURATION – THREE HOURS

Index Number :.....

DATE : 3rd JULY 2009

TIME 1.30. – 4.30 pm



Instructions

- This question paper has two parts , **Part A** and **Part B**.
- Answer question number **1** in **Part A** and **any four** questions from **Part B**.
- Please note that answering for **question number 1** in **Part A** is **Compulsory..**
- Answers to **Part A** should be written in the space provided in the question paper.
- Please hand over **Part A** along with the rest of answer scripts.

PART A

Question 1

Figure 1 shows the relationship between some body cells and their blood supply.

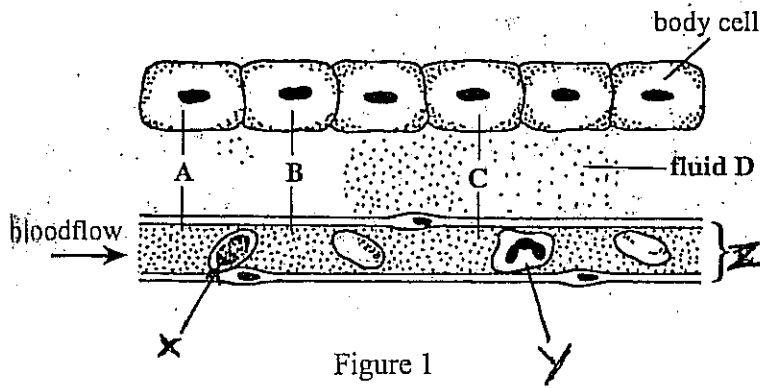


Figure 1

1.1. a. What is the name of fluid D ?

b. Name the chemical molecules which could be represented by the letters A,B and C

A----- B----- C-----

c. Name the type of cells represented by X

d. What is the main function of X cells ?

e. Mention five important characters present in X cells for its function

1.2.a. Name the type of cells represented by **Y** in human body

b. Write two functions of **Y** cells in the body

1.3 a. Name the types of cells and proteins in **Z** that involve in formation of blood clots.

b. What is the chemical present in **Z** that prevent blood clotting in the body?

c. Name the cells that secrete ant-clotting chemical.

d. Write two advantages of blood clotting

1.4.a. Following table shows some substances present in blood vessels in intestine and organs and their circulation in the body. Complete the blanks.

Substance	Vessel	Carried to
Amino acids		Liver
Fatty acids		Lymph node
Urea	Hepatic vein	
Carbon dioxide		Lungs

b. Acidity and alkalinity of the blood is controlled by renal mechanism in human kidney.

i. Name three processes that are involved in regulation of the acid base balance of blood by the kidney

ii. Following Figure 2 shows steps of one of the above mechanism.

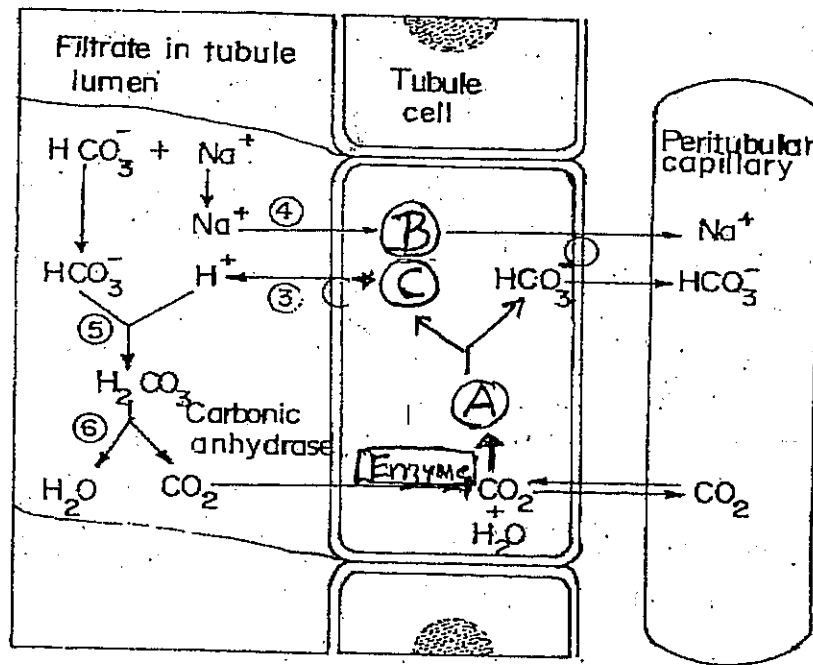


Figure 2

Name the process.

Process -----

iii. Name A, B and C

A -----

B -----

C -----

iv. Name the enzyme involved in above process

v. What is the percentage of carbon dioxide that are transported by blood plasma ?

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PART B

Answer any four (4) questions.

2. Briefly discuss the evolution of the nervous system from invertebrates to vertebrate animals.
3. Describe the second messenger mechanisms that operate in endocrine system in mammals giving one example.
4. Describe briefly sliding filament mechanism of muscle contraction
5. Describe cardiac cycle of human heart and its conducting system in operation
6. Discuss how hormones are involved in human female reproductive cycle.
7. Write short notes on **any two (2)** of the followings.
 - (a). Digestive system of ruminants
 - (b) Aerobic respiration
 - (c) Glomerular ultrafiltration in kidney
 - (d) Endoplasmic reticulum