

Homeostasis in mammals

Question Paper 2

Level	International A Level
Subject	Biology
Exam Board	CIE
Topic	Homeostasis
Sub Topic	Homeostasis in mammals
Booklet	Theory
Paper Type	Question Paper 2

Time Allowed : 55 minutes

Score : / 46

Percentage : /100

Grade Boundaries:

A*	A	B	C	D	E	U
>85%	'77.5%	70%	62.5%	57.5%	45%	<45%

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- 5 (a) Table 7.1 shows the effect of several events on the blood concentration of glucose, insulin and glucagon in a healthy person.

Complete the table using the words **increase**, **decrease** or **no effect**.

The first row has been done for you.

Table 7.1

event	initial effect of event on blood concentration of		
	glucose	insulin	glucagon
meal containing sucrose	increase	increase	decrease
meal containing only protein			
fasting			
exercising			
meal containing starch			

[4]

- (b) The concentration of glucose in the blood is controlled by the hormones insulin and glucagon.

Describe the part played by **glucagon** in the control of glucose in the blood.

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..... [3]

[Total: 7]

6 Urea is the main nitrogenous waste product in humans. It is made in the liver and excreted by the kidneys in urine.

(a) Define the term *excretion*.

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..... [2]

(b) The kidneys regulate the water potential of body fluids. This is known as osmoregulation and involves a negative feedback system.

Outline the role of negative feedback in osmoregulation.

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..... [4]

(c) Investigations have shown that when a person remains in a cold environment for more than 15 minutes there is increased urine production. This is called cold diuresis.

Suggest how exposure to cold can lead to cold diuresis.

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..... [2]

[Total: 8]