P530/2 BIOLOGY (Theory) Paper 2 August, 2024 Time: 2½ Hours

ASSHU BUSHENYI DISTRICT MOCK EXAMINATIONS 2024 UGANDA ADVANCED CERTIFICATE OF EDUCATION. BIOLOGY (THEORY) 2 HOURS 30 MINUTES

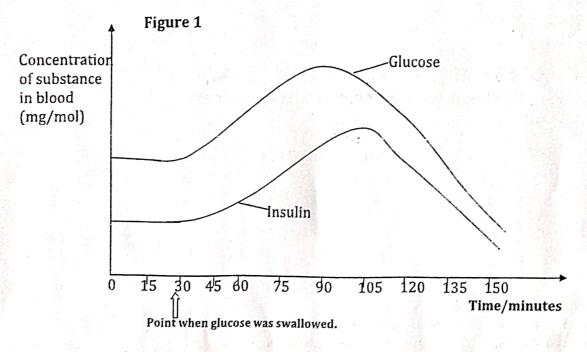
INSTRUCTIONS TO CANDIDATES:

- ❖ Answer question **ONE** in section A, plus **THREE** others from section B.
- ❖ Candidates are advised to read questions carefully, organize their answers and present them precisely and logically.
- Illustrate whenever necessary, with well labeled diagrams.

Question	A K SAR TEN		Marks
SECTION A			
SECTION B	e Bent to	C, I	y
No.			the second second
No.			\$ 100 miles
No.			
Total			

SECTION A (40marks) Compulsory question

1. Figure 1 below shows changes that occur in the concentrations of insulin and glucose in blood of an individual who had fasted overnight, and then swallowed 75g of glucose. Use it to answer questions that follow:



(a) Compare the levels of glucose and insulin after swallowing glucose?

(06marks)

(b) Explain the changes in the concentration of;

(i) Glucose

(05marks)

(ii) Insulin

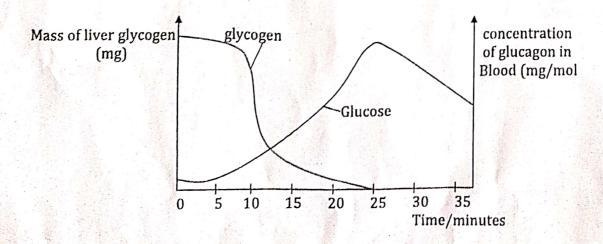
(05marks)

(c) Explain how the concentration of insulin would change if the person engaged in an exercise?

(04marks)

(d) Figure 2 shows changes in the amount of liver glycogen and glucagon concentration in blood of an individual during prolonged exercise.

Figure 2



(i) in bloc	Describe the effects of prolonged exercise on the anod?	nount of glycogen and	the concentration	orphicagon (04marks)		
(ii) (e)						
	SECTION B (6	(Omarks)				
	Attempt only 3	the state of the s				
2.	(a) Describe how a Carbondioxide molecule in the converted to a triglyceride.	mesophyll cells of a Ca p	plant can be	(10marks)		
(b) Explain the physiological and ecological advantages C4 plants have over C3 plants.						
(c) Explain the physiological significance of a chloroplast.						
3,	(a) Define the term immunity?			(dimark)		
	(b) Describe how;(i) the body reacts to a damaged blood vessel?(ii) the body reacts to presence of a foreign body in	ı blood?		(09marks) (07marks)		
	(c) Explain the consequences of over bleeding?			(03marks)		
4.	(a) How do hormones in the brain and kidney interfluid?	ract to regulate the ame	ount of water and	salt in tixsue (12marks)		
	(b) Explain the operation of a hair pin current multiple (c) State the significance of counter flow systems in		nle.	(05marks) (03marks)		
5.	(a) What is meant by the term organelle?			(03marks)		
	(b) Describe the structure of each of the following each case how the structure is related to function.	as seen in an electron n	nicroscope and in-	licate in		
	(i) Golgi complex.			(04marks)		
	(ii) Nucleus.			(04marks)		
	(iii) Mitochondrion.			(05marks)		
	(c) What are the functions of ribosomes in a cell?			(04marks)		
6.	(a) Compare the spores of a moss plant with the pe	ollen grains of angiospe	rms?	(13marks)		
	(b) Explain how seed formation has led to evolution	mary success in plants.		(07marks)		