

NAMESIGN.....

NAKWAYA SECONDARY SCHOOL

Uganda Lower Secondary Certificate of Education

END OF TERM II EXAMINATIONS 2023

S.3 BIOLOGY 553/1

(Theory)

1Hours 30 Minutes

INSTRUCTIONS

- *Answer all questions in this paper.*

1. Osmosis is one of the biological processes that are very important in our bodies and those of plants.

a) (i) What does the term ‘**osmosis**’ mean? (2marks)

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(ii) Why does your body need the process of osmosis? (2marks)

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(iii) How do plants benefit from osmosis? (2marks)

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b) Taaya prepared morning tea by putting tea leaves in a cup of cold water and stirred, it took 20 minutes before the water to turn to brown.

(i) Explain why the cold water took long to turn brown. (3marks)

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(ii) Suggest what Taaya would have done to make the water turn brown faster. Give a reason for your suggestion. (2marks)

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(iii) What is the name of the process that took place in cup? (1mark)

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(iv) Apart from during preparation of tea, state **three** importance of the process you have mentioned in b)(iii) above to our body.

(3marks)

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(v) How can you make the process mentioned in b)(iii) above to occur faster?

(3marks)

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- (vi) Which other process is involved in transporting materials, state where the process is employed by living organisms. (2marks)

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2. After the digestion of food in your alimentary canal, the products are transported via your transport system (circulatory system).

- a) (i) What could be the components of your body's transport system? (3marks)

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- (ii) Apart from food nutrients, which other **three** substances does your transport system carry in your body? (3marks)

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b) Mr. Mutebi is a known young rich man in a certain village who is fond of living a sedentary life and he's becoming addicted to alcohol and shisha.

- (i) State the likely circulatory problems that Mr. Mutebi is most likely to encounter at later stage of his life? (3marks)

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- (ii) Briefly advise Mr. Mutebi on how he should live in order to prevent the suggested problems. (4marks)

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c) Catherine got a boda boda accident and she lost a lot of blood through bleeding. She was rushed to a nearby clinic and the nurse said, “*Catherine needs blood*”. Catherine already knew her blood group as **B**.

- (i) Why is Catherine of blood group **B**? (2marks)

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- (ii) Suggest the possible donors of blood to Catherine. (2marks)

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- (iii) By what process was blood given to Catherine? (1mark)

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- (iv) What benefits did Catherine obtain from the process above? (2marks)





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3. You are well aware that; it is us (humans) who are causing low crop yields from our soil because we make it loose its fertility. Identify the following human activities in the pictures and state how they lead to loss of soil fertility. (10marks)

Photo	Activity in the picture	Effect on soil
		
		
		
		

		
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