BIOLOGY DEPT
END OF TERM ONE, 2025
BIOLOGY-SENIOR FIVE
DURATION: 1HOUR:45MINS

Instructions: *Attempt all questions and answer in the spaces provided.*

Item one

When viewed under an electron microscope, the cell of a bacterium *Helicobacter pylori*, has significant differences from a mesophyll cell extracted from a plant leaf. However, they also share some similar features such as cell membranes, cell walls and cytoplasm.

a) Mention the differences between the above cells.

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b) Describe the functions of the similar features the two cells share to cells.

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Item two

During the biology lesson, the teacher said ***without water, life could not exist on this planet.*** Paul a S.5 biology student got confused about it.

The teacher continued to mention that the roles of water in organisms are due to its small size, colour, polarity and ability to form hydrogen bonding.

a) Justify the teacher's statement that confused Paul.

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b) Show how the above properties of water the teacher mentioned enable water perform several functions in living organisms

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Item three

Musa a S.5 student had a burning stomach pain and bloating and did not manage to attend lessons. During the lesson the biology teacher taught about the tissues that cover the surfaces of the digestive tract/gut and he highlighted that they perform several functions including protection, secretion, absorption and many others.

a) Identify the types of tissues the teacher highlighted.

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b) Show how the tissues the teacher highlighted are adapted to perform their functions.

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c) Explain the possible cause(s) of Musa's disorder

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d) Show how the above disorder can be diagnosed and how they can be reduced.

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End