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BIOLOGY
Paper 1
(Theory)
Aug. 2026
2 hours

REGINA PACIS HIGH SCHOOL – MUKONO

Uganda Certificate of Education

BIOLOGY

PAPER 1
(Theory)
2 hours

INSTRUCTIONS TO CANDIDATES:

- *This paper consists of **four** examination items. Respond to items **1 and 2** in the spaces provided while items **3 and 4** on the answer sheets provided.*
- *No additional sheets of writing paper are to be inserted in this booklet.*

For Scorers' Use Only.

Item	Score	Comment
1		
2		
3		
4		
Total		

ITEM 1

Mr. Ogoya a farmer in Kiyonga village planted beans in his farm which were looking healthy. Suddenly a dry spell set in and most plants stunted in their growth, had their leaves turning yellow and could wilt. After sometime, the rains returned but Ogoya wanted to replant and as he uprooted some plants, he observed that they had developed many small branching roots with numerous nodules and new green leaves so he left them. At flowering stage, the garden was visited by numerous bees for some time after which the bean pods started forming and finally the beans produced low yields.

Task:

a) Identify the life processes in the bean plants were affected leading to low yields

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b) Explain how the processes in the bean plants were affected leading to low yields

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c) How did the beans overcome the prevailing conditions?

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Item 2

Kadero, a 40-year-old woman has been a heavy smoker for over 10 years. Lately she has been experiencing high blood pressurę, extreme headache and dizziness, and yellowing of teeth and difficulty in chewing. She also experienced a miscarriage at 7 months of her pregnancy. Although the baby boy survived, he had extremely low body weight and looked under developed for the age.

Task

a) Explain to Kadero the causes of the health challenges experienced by herself and her baby.

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b) Explain the advice you would give Kadero to overcome her health challenges.

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Item 3

Last year, residents near a certain lake faced many challenges, including frequent flooding, reduction in fish caught from the lake, disappearing of birds that used to stand on the lake shore and change in colour and smell of the lake water. This was attributed mainly to the illegal sand mining activities from Lake by some investor. The Authorities intervened and stopped all the activities but the investor was unhappy.

Task

(a) Explain how the challenges were brought about by the investor's actions.

(b) Why was it important for the authorities to intervene?

Item 4

Ojambo, a 24 year old drug addict who failed to conceive, felt unwell and went for a medical examination. She was diagnosed with multiple organ failure. Below is an extract from her medical report.

Organ examined	**Description of organ state**
Liver	Has scars, is shrunk and hardened
Pancreas	Blocked pancreatic duct and malfunctioning islets of Langerhans
Kidneys	Damaged glomeruli and faulty loop of Henle`
Lungs	Narrow bronchi, coated alveoli and paralysed cilia in trachea
Alimentary canal	Ulcers in ileum, villi and microvilli absent
Reproductive system	Blocked fallopian tubes with large ovarian cysts

Task:

(a) Explain to Ojambo how the status of her body organs as described above can result into poor body functioning and ill health.

(b) Advice Ojambo on how she can manage the conditions observed in her body organs.

END