**UGANDA CERTIFICATE OF EDUCATION**

**553/1 BIOLOGY Paper 1 Theory**

**MOCK ASSESSMENT**

**2024**

**2 hours 30 minutes**

**CANDIDATE’S NAME**; **……………………………………………………….**

**SIGNATURE; ………………………………………………………………………**

**INSTRUCTIONS TO CANDIDATES:**

This paper consists of seven examination items.

It has two sections; A and B.

Section A has three compulsory items.

Section B has two Parts; I and II.

Answer one item from each part. Answer five items in all.

Any additional item(s) answered will not be scored.

SECTION A

ITEM 1

Janen a 5 years old while in the kitchen accidentally touches a hot stove when she started off her daily playing activities at home and started crying which attracted the mother’s attention.



Describe the sequence of events in the reflex arc that occurs in response to this stimulus in coordinating Janen's reflexive withdrawal from the stove.( 6 scores)

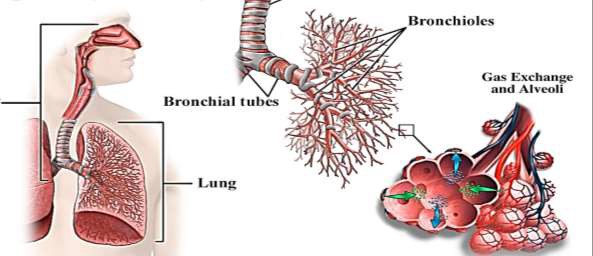
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Outline some of the importance of this simple spinal reflex in our daily living (4 scores)

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**ITEM 2**

A human respiratory system is one of the sophisticated system in the body in relation to its structures and the mechanisms of action. The system has various structures that enable it perform its function.



**A**

**D**

**B**

**C**

*Task*

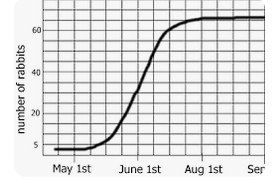
Write down using the words labelled on structures in the diagram, the function and adaptations of this system to its function. (*10scores*)

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ITEM 3

During a group project work, the team leader came up with an idea of to study the population growth of rabbits changes with time from May to September

You noticed a rapid population and presented it graphically to the class teacher who would award the marks



**Task**

1. Explain to the teacher the population change of the rabbits with the time of the study (8 Scores)

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b) What are the challenges that are face during this project study.(4 Scores)

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d). What did you learn from this study and how do you apply this in your daily living.(5 Scores)

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**SECTION B**

**PART I**

**Attempt one question from this part**

**ITEM 4**

For plants to be successful on Earth, some plants had their roots, leaves and stems modified to serve different plants a number of functions. Every year, an agricultural show is organized in Jinja to show people how plants can be grown effectively to sustain human life.

*Task;* Prepare a speech you will deliver to the people who will attend to the show explain to them how the above parts are modified to perform different functions in plants. Also explain how some of the above parts of the plant are vital in the propagation of the plant. (***20 scores*)**

**ITEM 5**

You were reading an article about Jane a 15 years old teenager in a secondary school, studying in a day school far away from their home. Every day after classes, she used to have a free lift by some boda boda man. At time she would move with her friends back home, As a result of bad peer groups, she started drinking alcohol and dodging school. When the school authority tried to trace why Jane was dodging school, they found out that she had a boyfriend in the nearby stage, where she would stay, without reaching school. A few months later, Jane started feeling sickly, nausea and vomiting. When her parents carried out an HCG urine test, it turned out positive and they were very bitter with her. She was expelled from school and parents also refused to pay her school fees

The man denied the pregnancy and flew away,

Task; You are asked to write an educational journal from this article that you are going to present to rest of the adolescence educating about Jane as a reference in a nearby secondary school.

Your group leader encourages you to involve important points like how teenage pregnancy comes about, possible causes, challenges, and how to prevent this calamity.(**20 scores)**

**PART II**

**Attempt one question from this part**

**ITEM 6**

Mr. openjulu prepared his garden well and planted beans which were looking healthy for the first three weeks. Suddenly, a dry spell set in and most beans had their leaves turning yellow, and some wilted. At flowering stage though, the garden was invaded by numerous bees for some time. After the visit by the bees, the bean pods started forming and finally the beans gave some yields.

a) Identify the major challenges faced by the bean plants in Mr.openjulu’s garden (2 scores)

b) Explain the internal processes that took place in the bean plants from the time bees visited until when the yields were realized.(15 scores)

c) How did the beans overcome the prevailing conditions to give some yields?(3 scores)

(**20 SCORES**)

**ITEM 7**

**ITEM**; John, a 28-year-old man, has been smoking cigarettes for the 2years.When interviewed during a research work , it Was found that after dropping out of school he stated smoking and drinking heavily, he says he has much stress including losing his contract work while at a constructing company, he has a group of friends who are also smoking and keep encouraging him that drinking is the only way to reduce his stress, he also added that he has had several women while clubbing at night and he’s also not sure of his HIV status. Recently, he has noticed that he gets tired more easily during physical activities such as climbing stairs. Concerned about his health, he decides to consult a doctor.

**Task;**

Write a report that the school is going publish to create awareness about the drug and substance abuse, including causes, effects of drug abuse using the substance in the above interview, also include possible ways of mitigating this act especially among the youth of Uganda, propose lifestyle changes or medical interventions that could potentially improve John's lung function and overall respiratory health. (**20 SCORES**).

**END.**