

P530/2  
Biology  
Paper 2  
July/August 2019  
2½ hours

## **BUGANDA EXAMINATIONS COUNCIL MOCKS**

**Uganda Advanced Certificate of Education**

**BIOLOGY**

**PAPER 2**

**2HOURS 30 MINUTES**

### **INSTRUCTIONS TO CANDIDATES:**

- Answer all questions in section **A** and any **three** in section **B**.

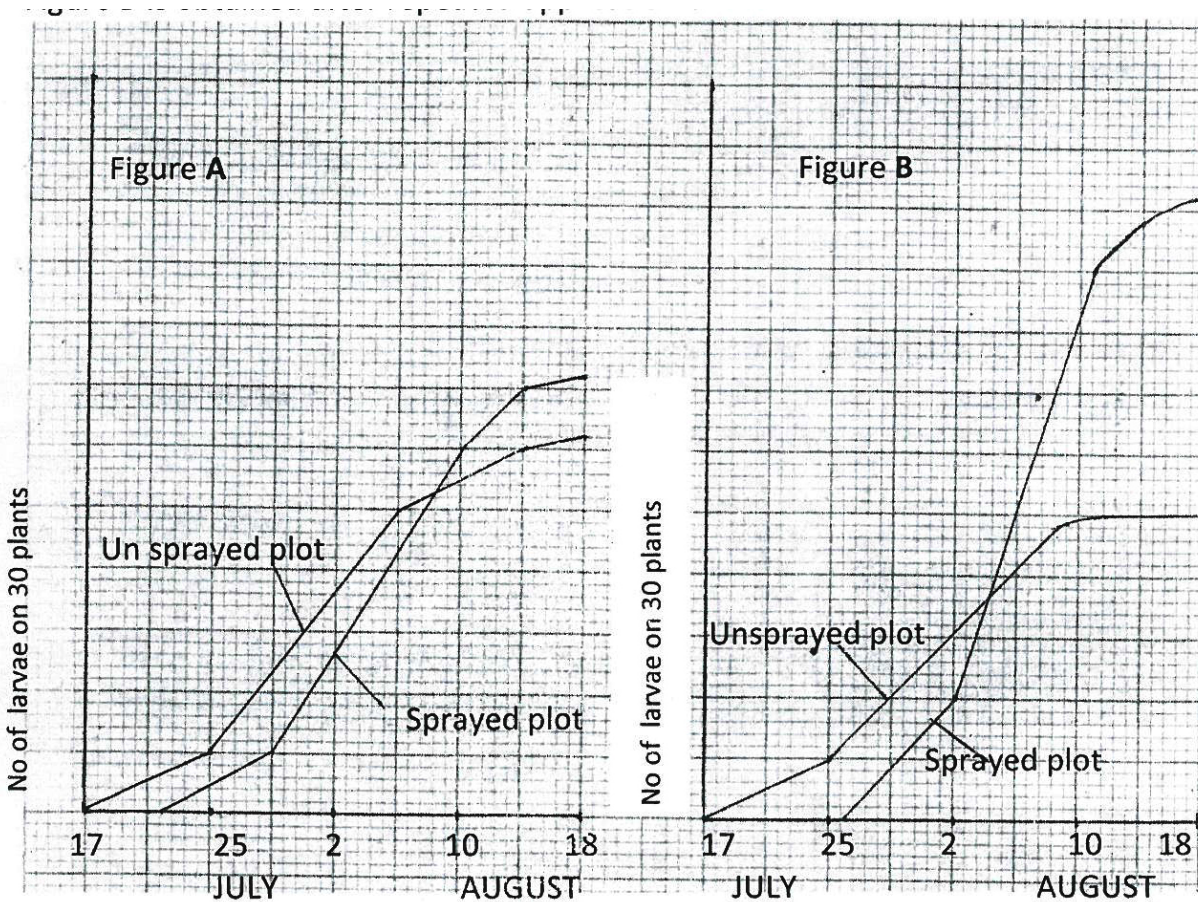
## SECTION A

- The figures below represent the number of white fly larvae on cabbage leaves for 30 days after spraying with non specific pesticide, **DDT**.

**DDT** affects adult white flies whose larvae destroy the cabbage leaves and are predated on by garden beetles.

Figure **A** is obtained after one application of **DDT**.

Figure **B** is obtained after repeated application of **DDT**.



- (a) Describe the changes in larvae number in figure **A** and **B**. (14marks)
- (b)(i) Compare changes in number of larvae in unsprayed and sprayed plots of figure **A**. (8marks)
- (ii) Explain the differences in changes of larvae number described above. (7marks)
- (c)(i) Explain the differences in larvae number changes between sprayed plots of figure **A** and **B**. (6marks)
- (ii) From the graph explain the effect of persistent use of pesticides. (5marks)

### SECTION B

Answer any *three* questions.

- 2(a) What is the role of Gibberellins and IAA in plant growth. (10marks)
- (b) Explain how a plant regulates water loss in hot weather. (10marks)
- 3(a) What is counter current system? (2marks)
- (b) Compare counter current multiplier of kidney tubules with counter current flow in the limbs of temperate animals. (12marks)
- (c) What is the significance of counter current system in animals? (6marks)
- 4. Explain the effects of fire;
  - (i) to biotic factors (10marks)
  - (ii) to soil fertility in an ecosystem (10marks)
- 5(a) Explain how temperature affects enzyme activity. (10marks)
- (b) Explain how amount of competitive inhibitor affects the rate of reaction. (10marks)
- 6(a) Describe how xylem structure is related to its function. (10marks)
- (b) Explain how human body responds to dehydration. (10marks)

**END**