

**UGANDA MARTYRS UNIVERSITY
NKOZI
UNIVERSITY EXAMINATION
FACULTY OF SCIENCE**

SEMESTER I, 2023/ 2024

**SECOND YEAR EXAMINATION FOR BACHELOR OF SCIENCE WITH
EDUCATION**

BIOS 2101: GROWTH AND DEVELOPMENT

DATE: 11/12/2023

TIME: 2:00 – 5:00pm

DURATION: 3HRS

Instructions:

- 1. Carefully read through ALL the questions before attempting*
- 2. Answer all questions in section A and 5 questions from B*
- 3. No names should be written anywhere on the examination booklet.*
- 4. Ensure that your Registration number is indicated on all pages of the examination answer booklet.*
- 5. Ensure your work is clear and readable. Untidy work shall be penalized*
- 6. Any type of examination Malpractice will lead to automatic disqualification*

SECTION A (Attempt ALL Questions)

1. Write short notes about the following;
 - a) Growth (3 marks)
 - b) Development (3 marks)
2. Using the necessary illustrations, discuss;
 - a) Mitosis (5 marks)
 - b) Meiosis (5 marks)
3. a) Discuss the factors affecting growth. (7 marks)
c) Using the necessary illustrations, probably a suitable graph, discuss the sigmoid growth curve in animals. (5 marks)
4. Discuss the different types of growth curves. (10 marks)

SECTION B (Attempt 3 questions - Each question has 20 marks)

5. Plants possess two types of meristems, discuss. (20 marks)
6. a) Define the term dormancy (3 marks)
c) Outline the causes of seed dormancy (5 marks)
d) Discuss the ways in which seed dormancy is broken (5 marks)
e) Outline the advantages of seed dormancy (7 marks)
7. a) Define the term germination (3 marks)
b) Outline the conditions necessary for seed germination (5 marks)
c) Discuss the different types of germination (12 marks)
8. Discuss primary growth in roots and shoots in plants (20 marks)

9. a) Discuss the process of growth in arthropods (10 marks)
- b) Outline the types of metamorphosis in arthropods (4 marks)
- c) Define the following;
- i. Diapause (2 marks)
 - ii. Hibernation (2 marks)
 - iii. Aestivation (2 marks)

END