

**CHUKA**



**UNIVERSITY**

**UNIVERSITY EXAMINATIONS**

**SPECIAL/ SUPPLEMENTARY**

**EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF SCIENCE**

**BOTA 322: PLANT GROWTH AND DEVELOPMENT**

**STREAMS: BED (SCI) BSC (BIO)**

**TIME: 2 HOURS**

**DAY/DATE: THURSDAY 12/08/2021**

**2.30 P.M. – 4.30 P.M.**

**INSTRUCTIONS: Answer ALL questions in section A and any TWO in sections B**

**SECTION A**

1. Giving appropriate examples for each, explain the difference between growth and development with respect to plants (5 marks)
2. Give the characteristics of meristem and list the meristems that are found in plants (5 marks)
3. Explain why some plants are able to grow continuously for hundreds of years while others only grow for a few months followed by death (5 marks)
4. Describe how alternation of generation occur in angiosperms (4 marks)
5. Explain the importance of juvenility in plants (4 marks)
6. Name a plant hormone that is involved in each of the following processes (3 marks)
  - i. Senescence
  - ii. Shoot architecture
  - iii. Cell elongation
7. Giving appropriate examples, describe abnormal growth in plants (4 marks)

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**SECTION B**

8. a. Describe the use of plant hormones in agricultural (10 marks)  
b. Describe the steps you would follow to develop a tissue culture protocol for a plant that has not been cultured before. (1 mark)
9. a. Describe the stages of embryo development in plants (10 marks)  
b. Discuss the types of asexual reproduction in plants (10 marks)
10. Discuss the process of double fertilization in plants (20 marks)
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