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**GARISSA UNIVERSITY**

**UNIVERSITY EXAMINATION 2018/2019 ACADEMIC YEAR ONE**

**SECOND SEMESTER EXAMINATION**

**SCHOOL OF BIOLOGICAL AND PHYSICAL SCIENCES**

**FOR THE DEGREE OF BACHELOR OF EDUCATION**

**COURSE CODE: BOT 110**

**COURSE TITLE: BASIC BOTANY I**

**EXAMINATION DURATION: 2 HOURS**

**DATE: 10/02/2020 TIME: 2.00-4.00 PM**

**INSTRUCTION TO CANDIDATES**

* **The examination has FIVE (5) questions**
* **Question ONE (1) is COMPULSORY**
* **Choose any other TWO (2) questions from the remaining FOUR (4) questions**
* **Use sketch diagrams to illustrate your answer whenever necessary**
* **Do not carry mobile phones or any other written materials in examination room**
* **Do not write on this paper**

**This paper consists of TWO (2) printed pages *please turn over***

**QUESTION ONE (COMPULSORY)**

1. Distinguish the following terms:

i) Gametophyte and Sporophyte: **[2 marks]**

ii) Monoecious and Dioecious: **[2 marks]**

1. i)) List four general characteristics of kingdom fungi. **[4 marks]**

ii) Outline FIVE economic uses of kingdom plantae. **[5 marks]**

1. i) List the two chemical components of a virus. **[2 marks]**

ii) State the six phases of the viral replication cycle **[3 marks]**  
iii) Name three roles of bacteriophages **[3 marks]**

1. Distinguish between the following terms  
   i) Active and passive transport **[2 marks]**  
   ii) Turgor pressure and wall pressure **[2 marks]**
2. I) Define fixation **[1 mark]**

ii) State four methods of fixation **[2 marks]**

iii) State four factors that affect fixation **[2 marks]**

**QUESTION TWO**

1. Nam five organelles present in the plant cell cytoplasm. **[10 marks]**
2. Briefly explain the functions of each organelle named above. **[10 marks]**

**QUESTION THREE**

1. Describe the component of the xylem. **[10 marks]**
2. Define cytoplasmic streaming and DISCUSS its significance in plant cell life. **[10 marks]**

**QUESTION FOUR**

1. Differentiate between plants cells and animals cells. **[8 marks]**
2. Explain the factors that determine the rate of photosynthesis and significance of osmosis in plant **[12 marks]**

**QUESTION FIVE**

1. Describe the general structure of cell membranes and list organelles made of membranes found in plant cells **[10 marks]**
2. Describe various ways substances go into and out of plant cells. **[10 marks]**