****

**W1-2-60-1-6**

**JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY**

**UNIVERSITY EXAMINATIONS 2019/2020**

**FIRST YEAR SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN HORTICULTURE/**

**BACHELOR OF SCIENCE IN HORTICULTURE/**

**AND**

 **BACHELOR OF SCIENCE IN AGRICULTURE**

**SBT 2220: PLANT PHYSIOLOGY**

**DATE: APRIL, 2020 TIME: 2 HOURS**

INSTRUCTIONS: ANSWER QUESTION ONE (COMPULSORY) AND ANY OTHER TWO QUESTIONS

**QUESTION ONE: 30 MARKS**

a. State the functions of the sap vacuole. (4 marks)

b. State the role of transpiration. (3 marks)

c. Identify five areas where crop producers may apply Gibberellins. (5 marks)

d. State five factors that affect respiration in plants. (5 marks)

e. Describe the role of phosphorous in plants. (4 marks)

f. Outline five factors that are involved in gravitropism. (5 marks)

g. Differentiate between the Juvenile and nature phases during plant growth. (4 marks)

**QUESTION TWO: 20 MARKS**

Describe the role of water in plants.

**QUESTION THREE: 20 MARKS**

Discuss the fate of pyruvic acid in the presence of oxygen.

**QUESTION FOUR: 20 MARKS**

Explain the physiological processes of light stage during photosynthesis.