****

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

**JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY**

**UNIVERSITY EXAMINATIONS 2019/2020**

**SECOND YEAR SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE**

**SBT 2270: BACTERIOLOGY**

**DATE: JANUARY 2021 TIME: 2 HOURS**

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

**QUESTION ONE: 30 MARKS**

a. i. State the bacterial genera that forms endispores. (5 marks)

 ii. Describe the cell wall of Archaea. (5 marks)

iii. Give reasons why acid fast bacteria are not sensitive to Gram-staining. (5 marks)

b. Explain the following:-

 i. Extreme halophiles. (2 marks)

 ii. Pros thecae. (2 marks)

 iii. Heterocyst. (2 marks)

 iv. Bacterial flagellation. (2 marks)

 v. Tumor including plasmid (2 marks)

c. Briefly explain phylogenetic characterization of bacteria. (5 marks)

**QUESTION TWO: 20 MARKS**

Discuss the role of bacteria in the environment.

**QUESTION THREE: 20 MARKS**

Discuss the spirochetes.

**QUESTION FOUR: 20 MARKS**

Discuss pure culture isolation from a bacterial culture mixture.