



## **UNIVERSITY OF EMBU**

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**2017/2018 ACADEMIC YEAR**

**SECOND SEMESTER EXAMINATIONS**

**FIRST YEAR EXAMINATION FOR THE DEGREE OF MASTER OF SCIENCE IN  
APPLIED MICROBIOLOGY**

**JPM 626: MOLECULAR BIOLOGY IN BACTERIOLOGY**

**DATE: APRIL 10, 2018**

**TIME: 2:00-5:00 PM**

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**INSTRUCTIONS:**

**Answer ANY FOUR Questions**

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**QUESTION ONE (25 MARKS)**

Describe the process and mechanism of DNA uptake in Gram positive bacteria.

**QUESTION TWO (25 MARKS)**

Describe replication of the bacterial chromosome.

**QUESTION THREE (25 MARKS)**

Describe how plasmids can be isolated, purified and characterized in a university laboratory.

**QUESTION FOUR (25 MARKS)**

Discuss conjugation in streptomyces and how it differs from other conjugation mechanisms.

**QUESTION FIVE (25 MARKS)**

Discuss the role of plasmids in antibiotic resistance of Gram negative bacteria.

**--END--**

