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**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 MEDICAL MICROBIOLOGY**

**MMB 2110: DISASTER MANAGEMENT PREPAREDNESS AND BIOSECURITY**

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

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

**QUESTION ONE: 30 MARKS**

a. Define the following terminologies:-

 i. Biosecurity. (1 mark)

 ii. Bioterrorism. (1 mark)

 iii. Biocrime. (1 mark)

 iv. Biological warfare. (1 mark)

 v. Laboratory Biosafety. (1 mark)

 vi. Biodefence. (1 mark)

b. Explain six characteristic of potential agents used in Bioterrorism. (6 marks)

c. Describe etiological agents and forms of plague. (6 marks)

d. Briefly explain international treaties on Bioweapons. (6 marks)

e. i. Define quality assurance. (2 marks)

 ii. Give four components of a quality assurance programme. (4 marks)

**QUESTION TWO: 20 MARKS**

Discuss categories of potential genetically engineered pathogens of futuristic threats.

**QUESTION THREE: 20 MARKS**

Discuss international initiatives on laboratory Biosafety and Biosecurity.

**QUESTION FOUR: 20 MARKS**

Discuss disaster capacities for health disaster management.