



# **GRETSA UNIVERSITY - THIKA**

## **UNIVERSITY EXAMINATIONS JANUARY – APRIL 2017 SEMESTER**

### **CERTIFICATE IN MEDICAL LABORATORY SCIENCE**

**COURSE CODE: CIML 030**

**COURSE TITLE: MICROBIOLOGY II**

**DATE: 6 APRIL 2017**

**TIME: 11.30 AM – 1.30 PM**

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#### **INSTRUCTIONS TO CANDIDATES**

1. SECTION A IS **COMPULSORY**.
2. SECTION B: ANSWER ANY OTHER **THREE** QUESTIONS.
3. **DO NOT** WRITE ANYTHING ON THIS QUESTION PAPER AS IT WILL BE AN EXAM IRREGULARITY.
4. ALL ROUGH WORK SHOULD BE AT THE BACK OF YOUR ANSWER BOOKLET AND CROSSED OUT.

**CAUTION:** All exam rooms are under CCTV surveillance during the examination period.

**SECTION A**

**40MKS**

1. Which of the following is a vector too man
  - A. Malaria
  - B. Leishmaniasis
  - C. bubonic plague
  - D. louse
2. Which of the following is not a microorganism?
  - A. Bacterium
  - B. Insect
  - C. Algae
  - D. Fungus
3. Which of the following is a shape of bacteria?
  - A. Coma
  - B. Rod
  - C. Spherical
  - D. All of the above
4. Who among the following developed the spontaneous generation?
  - A. Robert Korch
  - B. John Needham
  - C. Louis Pasteur
  - D. Joseph Lister
5. Which of the following is a nosocomial infection?
  - A. Marasmus
  - B. UTI infections
  - C. Malaria
  - D. Rickettsia
6. Outline any 6 routes of entry of microorganisms into the body 6mks
7. Outline the procedure of collecting urine for bacteria analysis. 6mks

8. What is the function of a biosafety cabinet? 3mks
9. Outline the procedure of staining a thick smear using Field stain technique 6mks
10. Explain the mode of replication of bacteria 6mks
11. Draw a well labeled diagram of the structure of bacteria cell 6mks
12. Outline any 4 shapes of bacteria 2mks

**SECTION B**

**60MKS**

1. a) Briefly describe the procedure of thin smear preparation 8mks  
 b) Discuss the procedure of using a microscope 12mrks
2. a) Briefly explain the classification of bacteria 10mks  
 b) Discuss the 5 ways identifying a bacteria in the laboratory 10mks
3. a) Discuss 6 general characteristics of viruses 12mks  
 b) Discuss 4 diseases caused by viruses 8mks
4. a) Explain the procedure of gram stain technique 8mks  
 b) Explain any 6 growth requirement for bacteria 12mks
5. a) Explain how you would diagnose malaria in the laboratory 10mks  
 b) Explain the procedure of collecting blood from a vein (venous blood). 10mks