

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

**JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY**

# **UNIVERSITY EXAMINATIONS 2014/2015**

**FIRST YEAR SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN MEDICAL MICROBIOLOGY**

**MMB 2174 :L MEDICAL INSTRUMENTATION**

**DATE: DECEMBER 2014 TIME: 2 HOURS**

**INSTRUCTIONS:**

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**QUESTION ONE**

1. (i) Briefly describe a polymerace chain reaction machine (PCR) and the steps involved in its use [5 marks]

(ii) State three characteristics of Boro-silicate glass used to manufacture laboratory glass wave [3 marks]

(iii) Describe the types and uses of medical laboratory funnels. [2 marks]

1. (i) Mention the two types of balances used in a medical laboratory [2 marks]

(ii) Describe how we use and take care of balances [6 marks]

(iii) Describe the principle of fluorescence microscopy [4 marks]

1. (i) Briefly describe the basic components of a centrifuge [3 marks]

(ii) Describe what is a haemoglobinometer and its use in a medical laboratory. [3 marks]

(iii) List two types of dispensers [2 marks]

**QUESTION TWO**

Discuss decontamination of laboratory using chemical disinfectants [20 marks]

**QUESTION THREE**

Discuss autoclaves [20 marks]

**QUESTION FOUR**

Discuss 2 laboratory instruments used for purifying water. [20 marks]