MURANG'A UNIVERSITY COLLEGE

(A Constituent College of Jomo Kenyatta University of Agriculture and Technology)

SCHOOL OF PURE AND APPLIED SCIENCES

CLASS AS/BIO/14D

UNIT TITLE : LABORATORY PRACTICE AND MANAGEMENT

UNIT CODE: ASB1106

END OF STAGE ONE

DATE: 29 JULY 2015 TIME: 2HRS

ANSWER ALL THE QUESTIONS

1. Differentiate the ***TWO*** types of glasses used to make various glass wares. (4 marks)

2. a) Define sterilization (1 mark)

   b) List ***THREE*** methods that can be used to sterilize items in a laboratory. (3 marks)

3. Give ***FOUR*** classes of wounds and their causes (4 marks)

4. Differentiate between the two constructions patterns of laboratory benches

(4 marks)

5. Describe how a very thin capillary tube can be made from a glass tube of a larger diameter.

(4 marks)

6. a) Briefly explain why conc. H_2SO_4 would be thought to be a source of danger in the lab.

(2 marks)

b) State with reason the best type of water used for the preparation of analytical chemical reagents

(2 marks)

7. State ***TWO*** advantages of using plastics in each of the following

   I) bench tops

   ii) Laboratory sinks (4 marks)

8. Outline **SIX** factors considered when selecting material for a laboratory bench. (6 marks)

9. Outline the treatment of phosphorus burn. (4 marks

10. State the factors that determine how much illumination results from a particular lighting design. (4 marks)

SECTION B

11. a) Discuss each of the following fire extinguisher

i) Soda acid (6marks)

ii) Foam (5 marks)

b) Describe the first Aid treatment/administration to a victim of fainting (5 marks)

c) Differentiate between burn and scald (4 marks)

12. a) Describe the safety requirements of a school science laboratory. (10 marks)

b) Explain the common laboratory ventilation found in most laboratories. (6 marks)

c) Describe the disposal of accident victim (4 marks)

13 a) Outline the process of making a Y- joint in glass blowing glass (4 marks)

b) Describe ***THREE*** common defects encountered in bonding in glass blowing (6marks)

c) Explain the cleaning of a stained ceramic ware (4marks)

d) Explain the use of the following in radioactive safety

i) Film badge

ii) Pocket dosimeter

iii) Bacteriostat

(6 marks)