



MURANG'A UNIVERSITY COLLEGE
(A Constituent College of Jomo Kenyatta University of Agriculture and Technology)
SCHOOL OF PURE AND APPLIED SCIENCES

CLASS AS/BIO/CHEM/13D

UNIT TITLE : LABORATORY PRACTICE AND MANAGEMENT

UNIT CODE : ASB1306

END OF TERM EXAM

DATE :29 JULY 2015

TIME 3HRS

ANSWER ALL THE QUESTIONS

1. Differentiate the **two** types of glasses used to make various glass wares. (4 marks)
2. Explain the following types of burns
 - a) First degree burn (2 marks)
 - b) Second degree burn (2 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. 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. a) Explain the term glare as used in illumination (1 mark)
- b) State any **three** ways of eliminating glare in lighting (3 marks)

SECTION B

11. a) Explain the storage and transportation of liquid Helium (7 marks)
- b) Explain **four** applications of cryogenic substances
- c) State any **four** causes of fainting (4marks)
- d) Describe the first Aid treatment/administration to a victim of fainting (5 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) Differentiate between the two types of fume hoods found in the chemical laboratory (4 marks)
13. a) Explain the use of each component in developer solution in photography (5marks)
- b) Define the following as used in purchasing
- i) Credit note
 - ii) Debit note
 - iii) Catalogue
 - iv) Tender (4marks)
- c) Explain the steps involved in purchasing of laboratory chemicals or apparatus (9 marks)
- d) Give **four** reasons for stock taking (2 marks)