



SOUTH EASTERN KENYA UNIVERSITY

UNIVERSITY EXAMINATIONS 2016/2017

FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF OF SCIENCE IN BIOCHEMISTRY AND MOLECULAR BIOLOGY, BACHELOR OF SCIENCE IN CHEMISTRY AND BACHELOR OF EDUCATION (SCIENCE)

BCH106: GENERAL LABORATORY SAFETY

6TH DECEMBER, 2016

TIME:4.00-6.00 P.M

INSTRUCTIONS TO CANDIDATES

- (a) Answer ALL the Questions in Section A**
- (b) Answer ANY TWO Questions in Section B**
- (c) Illustrate your answers with well labeled diagrams where appropriate**

SECTION A (30 Marks)

1. Explain **three** reasons for making stock solutions. **(3 marks)**
2. Give **three** special cases that should be reported to the laboratory supervisor prior to any laboratory sessions. **(3 marks)**
3. Briefly describe **three** types of personal protective equipment. **(3 marks)**
4. Identify **six** causes of common laboratory accidents. **(3 marks)**
5. Explain **three** challenges limiting safety precautions in SEKU laboratories. **(3 marks)**
6. State **three** precautions one should observe when disposing waste products from recombinant DNA technology. **(3 marks)**
7. Briefly describe three types of radiations common in science laboratories. **(3 marks)**
8. Distinguish between Molarity and Molality **(2 marks)**

9. State the interventions that can aid in increasing the solubility of solutes during solution preparation. **(3 marks)**

9. Outline four steps of the scientific process. **(4 marks)**

Section B

10. Discuss five common laboratory accidents and their first aid measures. **(20 marks)**

12. Discuss the various causes of electric-related hazards and suggest precautionary measures for each of the hazards. **(20 marks)**

13. Using proper illustrations, discuss at least **five** laboratory safety symbols. **(20 marks)**

14. Most laboratory accidents are as a result of carelessness of users. Explain why this statement may NOT be necessarily true. **(20 marks)**