

**NATIONAL OPEN UNIVERSITY OF NIGERIA**

91Cadastral Zone, Nnamdi Azikwe Expressway, Jabi, Abuja

**FACULTY OF EDUCATION**

**FIRST SEMESTER EXAMINATION, JULY, 2017**

**COURSE CODE:** SED 835

**CODE TITLE:** LABORATORY DESIGN AND MANAGEMENT

**UNIT**: 3

**INSTRUCTION:** Answer question **ONE** and any other **THREE** questions.

**DURATION:** 3 Hours

1. (a) Discuss any FIVE classes of chemical hazards that science students could be

 exposed to in the laboratory. (15 marks)

(b) Enumerate FIVE types of glassware hazards that science students are prone to sustain in the laboratory. (5 marks)

(c ) List FIVE types of labeling the containers of laboratory chemicals could have

(5 marks)

2. (a) Mention FIVE factors you would consider when preparing a school laboratory.

 ( 5 marks)

(b) The effectiveness of science laboratory depends on its design, discuss Five structural designs that would guide the construction of a complete laboratory.

(10 marks)

3. (a) What is a preparatory room? Discuss FOUR requirements for a workable

 preparatory room. (10 marks)

(b) Enumerate any FIVE essential materials a preparatory room should contain

 (5 marks)

4. Discuss TEN essential elements of scientific report writing. (15 marks)

5. Briefly explain the following terms:

 (i) Unserviceable non-consumable items

 (ii) Obsolete instruments

 (iii) Chemical wastes

 (iv) Staff resource centre

 (v) Laboratory material management (15 marks)