



NATIONAL OPEN UNIVERSITY OF NIGERIA
Plot 91 Cadastral Zone, Nnamdi Azikwe Express Way, Jabi, Abuja.
DEPARTMENT OF SCIENCE EDUCATION

EXAMINATION: 2021_2
COURSE CODE: SED324
COURSE TITLE: SCHOOL SCIENCE LABORATORY
CREDIT UNIT: 2
TIME ALLOWED: 2 HOURS
INSTRUCTION: ANSWER QUESTION ONE AND ANY OTHER TWO

- 1a. State the possible hazards that could be caused by the following actions of your students during chemistry practical class that you are supervising.
- i. Having a long dangling hair. **(2Marks)**
 - ii. Looking into the mouth of a test tube during chemical reactions. **(2Marks)**
 - iii. Not wearing a safety spectacle. **(2Marks)**
 - iv. Not wearing a laboratory coat. **(2Marks)**
 - v. Using the mouth to draw chemical into a pipette. **(2Marks)**
- b. Science laboratory is to a science student as labour room is to a pregnant woman. Discuss. **(10Marks)**
- c. Because laboratory has always been the most distinctive feature of science instruction. Some Nigerian science projects have placed emphasis on laboratory work. Name them and discuss briefly the wide use. **(10Marks)**
- 2a. How is storage of materials best achieved and what specific requirements must be met when storing chemicals which are hazardous, flammable and combustible? **(6Marks)**
- b. The preparatory room is a convenient place to safely store laboratory materials and to set up experiments and demonstration. Discuss. **(8Marks)**
- c. What are the recommended clean up procedures for glassware used in the laboratory? **(6Marks)**
- 3a. What are your roles as a Science Teacher in a secondary school science Laboratory? **(10Marks)**
- b. What would you propose as key steps that we can take to nurture a positive safety culture within laboratory research groups? **(3Marks)**
- c. Match the following colours hazards with the nature of the chemicals. **(7Marks)**

COLOUR	NATURE
Orange	Radio Active
Red	Oxidiser

Blue	Corrosive
Yellow	Explosive
White	Water reactive
White or Yellow	Flammable
Black or White	Toxic or Infectious

- 4ai. What is a School Laboratory? **(4Marks)**
- ii. In a situation where there are no enough chemicals and apparatus to get round the students for titration. Explain the use of computer to teach the concept. **(4Marks)**
- b. Name and sketch four shapes of school laboratory that you know. **(6Marks)**
- c. Another science teacher in your school is planning to do an experiment with strong acid and strong base. What safety equipment will you advise him to get ready in preparation for the experiment. **(6Marks)**