



NATIONAL OPEN UNIVERSITY OF NIGERIA

91 Cadastral zone, NnamdiAzikiwe Expressway, Jabi, Abuja

FACULTY OF EDUCATION

EXAMINATION: 2021_1
COURSE CODE: SED313
COURSE TITLE: IMPROVISATION IN INTEGRATED SCIENCE
CREDIT UNIT: 2
TIME ALLOWED: 2HOURS
INSTRUCTION: ANSWER QUESTION ONE AND ANY OTHER TWO

QUESTION ONE

- a. The term improvisation has been variously defined. Give your own working definition of improvisation. **(4mks)**
- b. Improvisation of instructional materials for integrated science teaching and learning is of great essence. State and Discuss any **five (5)** reasons for the need of Improvisation. **(20mks)**
- c. Give three (3) sources of science instructional materials from immediate environment available to the teacher (**6 marks**)

QUESTION TWO:

- a. List five (5) physical resources for utilization in teaching and learning of science. **(5mks)**
- b. Discuss how each of these physical resources can be effectively utilized to enhance learning of integrated science concepts **(15mks)**

QUESTION THREE

In terms of **Aims, Materials, Procedure** and **Result**, discuss how you could improvise Citric acid (an acid) from local fruits and materials **(20mks)**

QUESTION FOUR

- a. Of what relevance are science process skills to scientists? **(5mks)**
- b. **List five (5)** basic science process skills, **explain** the concepts **including** how an effective Integrated Science teacher could instill these skills on the learner. **(15mks)**