



NATIONAL OPEN UNIVERSITY OF NIGERIA

Plot 91 Cadastral Zone, Nnamdi Azikwe Express Way, Jabi, Abuja.

DEPARTMENT OF SCIENCE EDUCATION

2021_2 EXAMINATION

COURSE CODE: EDU754

COURSE TITLE: INTEGRATED SCIENCE METHODS

CREDIT UNIT: 2

TIME ALLOWED: 2HOURS

INSTRUCTION: ANSWER QUESTION ONE AND ANY OTHER TWO

- 1a. State the philosophy and explain any four (4) objectives of integrated science as fashioned out by the Federal Government of Nigeria. **(12Marks)**
- bi. Integrated science was introduced in Junior secondary schools of many countries to solve some educational problems. Mention some advantages of having Integrated Science in science education curriculum. **(3Marks)**
- ii. What were the problems faced in the past in schools for the inclusion of Integrated Science? **(3Marks)**
- ci. What is the full meaning of the acronym STEM? **(2Marks)**
- ii. Examine the relationship between Integrated Science and STEM **(4Marks)**
- d. Describe the steps you would take as a science teacher to teach sinking and floating using inquiry method **(6Marks)**
- 2ai. Describe teacher-made test **(5Marks)**
- ii. Explain five characteristics of the teacher-made test. **(5Marks)**
- bi. Explain Gagne's theory of learning, **(5Marks)**
- ii. Use Gagne's theory of learning to explain briefly the importance of pre-test in a science classroom. **(5Marks)**
- 3a. What is a test? **(3Marks)**
- b. List and explain functions of test According to Findley (1963) **(5Marks)**
- c. Explain the project method under the following headings:
 - i. Definition **(4Marks)**
 - ii. Advantages **(4Marks)**
 - iii. Disadvantages **(4Marks)**
- 4ai. Who was Jean Piaget? **(2Marks)**

- ii. Outline his biography. **(2Marks)**
- iii. List the four (4) stages of intellectual development in children. **(4Marks)**
- b. Explain the discovery method of teaching under the following headings:
 - i. Advantages. **(3Marks)**
 - ii. Disadvantages **(3Marks)**
- ci. As a professional teacher, how would you differentiate methodology from teaching?
(2Marks)
- ii. Enumerate the factors that made you a qualified teacher. **(4Marks)**