



**NATIONAL OPEN UNIVERSITY OF NIGERIA**  
**14-16 AHMADU BELLO WAY, VICTORIA ISLAND, LAGOS**  
**SCHOOL OF EDUCATION**  
**JANUARY/FEBRUARY 2013 EXAMINATION**

**Course Code:** EDU 756    **Credit:** 2  
**Course Title:** Physics Methods  
**Time Allowed:** 2 Hours  
**Instructions:** Answer question number one (1) and any other three (2) questions.

Use the answer booklet provided.

- 1a. Describe the role of the colonial government in the historical development of science education in Nigeria before independent.
- b. i Describe R. Gagne's theory of learning.  
ii State five (5) implications of R. Gagne's theory of learning for science teaching and curriculum development.
- c. i Describe how you would develop a Physics scheme of work for Senior Secondary School students in Nigeria.  
ii What are the factors that would guide you in developing effective scheme of work?

(30 marks)

- 2a. Briefly discuss the African Primary Science Project (APSP) by stating the financiers, the date of initiation of the project, the curriculum material produced for execution of the project and the emphasis of the project.

- b. i Briefly explain the 'Discussion method' of teaching Physics.  
ii. State the advantages and disadvantages of this method in the teaching of Physics

(20 marks)

- 3a. i Explain the term improvisation of instructional material.  
ii What are the steps involved in improvisation of instructional materials?  
iii Why is improvisation of instructional materials important to the Nigerian teacher?

- b. i Distinguish between scientific theory and scientific law.  
ii Give two (2) examples for each of the above concepts

(20 marks)

- 4a.**
- i. List five (5) basic features of a Physics laboratory that provide for safety right from construction stage.**
  - ii. Identify five (5) common injuries that students can sustain in the Physics laboratory**
- b. Identify and discuss four (4) roles of the head of Physics unit apart from teaching Physics.**

**(20 marks)**

13021401 8
---------------