



Science Education Department,
Faculty of Education,
National Open University of Nigeria.
2025_1 EXAMINATION...

SED 811- FOUNDATIONS OF SCIENCE EDUCATION (3C)

INSTRUCTION- Answer Question 1 and ANY other Three (3)

TIME: 2 HRS

- 1A. Explain how Newton's principle serves as an example of metaphor in science
- 1B. What is a model? Explain the following models in science
 - a. Iconic models
 - b. Analogue models
 - c. Symbolic models
- 1C. Explain John Locke's view in scientific thinking.
- 2A. What is a disciplinary matrix?
- 2B. Who developed the earliest view of nature of science and when? What was the process called?
- 2C. What is the main objective of Popper in setting up the falsification methodology?
- 3A. Who decides the tenets of science and why?
- 3B. What's Newton's view of 'Force' as a realist?
- 3C. What are the major aspects of the scientific world view?
- 3D. State two fundamental features of African world-view.
- 4A. Define a theory and give two examples of a scientific theory
- 4B. Briefly explain the following
 - a. Declarative knowledge (DK)
 - b. Procedural Knowledge (PK)
 - c. Operational Knowledge (OK)
- 5A. Briefly describe each of the following
 - a. Facts
 - b. Concepts
 - c. Generalization
- 5B. Discuss the importance of scientific inquiry in science teaching
- 5C. Explain the following using relevant classroom examples
 - a. Processes of science
 - b. Scientific attitude