



NATIONAL OPEN UNIVERSITY OF NIGERIA  
Plot 91 Cadastral Zone, Nnamdi Azikwe Expressway, Jabi, Abuja  
DEPARTMENT OF SCIENCE EDUCATION  
**2022\_2 POP EXAMINATION**

**COURSE CODE: SED811**  
**COURSE TITLE: FOUNDATIONS OF SCIENCE EDUCATION**  
**CREDIT UNIT: 3**  
**TIME ALLOWED: 3 HOURS**  
**INSTRUCTION: ANSWER QUESTIONS ONE AND ANY OTHER THREE**

1a. Japan's entry into the scientific and technological age is not an accident but as a result of a well planned and implemented science education programme, What are the five (5) major policies that shaped the Japanese science and technology curriculum? **10MARKS**

b. Distinguish between immature and normal science. **3MARKS**

c. Identify and briefly discuss the three (3) most important paradigm changes that have taken place during the last 500 years in astronomy, biology and physics **12MARKS**

2a. What is a disciplinary matrix? **2MARKS**

b. Using three (3) paragraphs, write in support of Bronowski, whose fundamental premise is that there can be no division between man the thinker, man the receiver of sensations and man the author in the world. **9MARKS**

c. Put up two (2) arguments to support the main objective of Feyerabend's Anarchist Conception of Science. **4MARKS**

3a. New directions could be given to curriculum planning by basing it upon some of the common trends that emerge from the new philosophy of science. What are the five (5) major importance of these modern philosophical views of science teaching. **10MARKS**

b. What are the two (2) major steps that should be taken to ensure that societal control over scientific activity last longer? **5MARKS**

4a. Give your definition of History? **1MARK**

b. Adduce seven (7) reasons why it is necessary for every science teacher to be exposed to the study of history of science. **14MARKS**

5. There was science before there were scientists, in five (5) paragraphs discuss the historical background of science to support this view from the 2,400,000 to 599 BC **15MARKS**