



NATIONAL OPEN UNIVERSITY OF NIGERIA
91 Cadastral zone, Nnamdi Azikiwe Expressway, Jabi, Abuja
FACULTY OF EDUCATION
2025_1 EXAMINATION

COURSE CODE: **SED 834**
COURSE TITLE: **SCIENCE, TECHNOLOGY AND SOCIETY (STS)**
CREDIT UNIT: **3**
TIME ALLOWED: **3HOURS**
INSTRUCTION: **ANSWER QUESTION 1 AND ANY OTHER 3**

Question 1

- a. Biotechnology is an interdisciplinary field of science and technology that provides a multitude of advantages across diverse domains; explain the term Biotechnology?
- b. Through biotechnology, genetic materials in organisms have been manipulated to produce genetically modified organisms (GMOs); i. identify and explain this key process of gene manipulation?
- ii. Using bacteria as an example outline the five steps involved in altering the gene of organisms in the laboratory?
- iii. Highlight five benefits of genetically modified organisms called transgenic?

25 marks

Question 2

- a. Define Science. Technology and Society (STS)
- b. Breakthroughs in science and technology have led to the discovery of alternative energy sources for the benefit of the society; describe three alternative energy sources that could be utilized in Nigeria and explain its benefits.

15 marks

Question 3

- a. The intersection of science, technology and healthcare is a dynamic and transformative field that offers numerous benefits to the society; Define health care.
- b. Discuss areas in health care where scientific research and technological advancements have led to breakthroughs.
- c. Identify three ways diseases and their cause's impact families.

15marks

Question 4

- a. What is Environmental Education?
- b. List 4 goals of environmental education.

c. Suggest four ways the Federal Ministry of Environment (FME) can raise awareness and encourage appropriate actions.

15 marks

Question 5

5. a. Define desertification and state its two main characteristics.

b. Discuss the three primary causes of desertification.

15marks