



**NATIONAL OPEN UNIVERSITY OF NIGERIA
FACULTY OF AGRICULTURAL SCIENCES
DEPARTMENT OF CROP AND SOIL SCIENCES
2023_2 EXAMINATIONS**

COURSE TITLE: ENVIRONMENTAL IMPACT ASSESSMENT (2CU)

COURSE CODE: AGR 307

TOTAL SCORE: 70 MARKS

TIME ALLOWED: 2hours

INSTRUCTION: Answer FOUR Questions in all.

Question 1 is compulsory (30marks) and any two questions (20 marks each)

QUESTIONS

Q1 Below is a report an EIA for a planned Banana plantation in Ikoja, Kogi State. Read and carefully answer the preceding questions

An Environmental Impact Assessment (EIA) study was initiated in Ikoja in North Central Nigeria to assess the environmental and social impacts of a planned 500 ha Banana plantation. The aim of the project was to grow and export good quality Banana to other parts of the world. The proposed site is located about 16 km from Ikoja town, a booming and well established industrial and residential zone.

A thorough scoping exercise showed that the project has a number of potentially positive impacts such as employment opportunities for low- income farmers and teeming youth population, introduction of modern technology, provision of feeder road to numerous small-scale farmers, etc. The potentially negative impacts include soil degradation, land erosion, loss of arable land for staple crops, water resource depletion, water pollution, human health problems, emergence of new pests and waste disposal.

Water resource depletion was found to be the most serious problem as the farming system will rely on irrigation for all-year round production and fruit processing and the ground water potential of the surrounding area is already overwhelmed by unregulated industrial extraction. The industrial estate and local community depend on the same ground water for their industrial and domestic use resulting in potential conflicts. The Scoping exercise suggested that an alternative site should be identified to implement the project at full scale or reduce its size so as to make the project sustainable at the proposed site.

- a) Identify five (5) most significant potential adverse effects/impacts of the proposed Pineapple plantation on the proposed site. (10marks)
- b) For each of the identified potential significant effect/impact propose mitigation measures to reduce, minimize or ameliorate the effect. (10 marks)
- c) Suggest and justify alternatives to the proposed agricultural project or site taking into consideration the aim of the project to grow and export good quality Pineapple. (10marks)

Q2.

- a) Justify as to why Strategic Environmental Assessment (SEA) is particularly more important in EIA. (8marks)
- b) List the three typical questions that can be addressed or required in health impact assessment (HIA). (12marks)

Q3

- a) Discuss in brief how mitigation measures are conducted in EIA. (5marks)

- b) Establish mitigation measures for the following impact actions;
- 1) 600ha of fresh land would be lost to accommodate the Sorghum farm
 - 2) Precious community items on farms to be moved to a new place
 - 3) a husbandry farm within the land area will be distorted.
 - 4) access to a river used by a community for drinking and other purposes will be blocked
 - 5) the project will block the movement of cattle from the north to other parts of the country for their feeding ground. (15marks)

Q4

- a) Develop the reports prepared in the conduct of an EIA to evaluate the process in the EIA. (10marks)
- b) Recall the chapters heading of table of Contents of an environmental impact assessment report. (10marks)