



NATIONAL OPEN UNIVERSITY OF NIGERIA
FACULTY OF AGRICULTURAL SCIENCES
DEPARTMENT OF CROP AND SOIL SCIENCES
2025_2 EXAMINATIONS

COURSE TITLE: PRINCIPLES OF IRRIGATION AND DRAINAGE (2 CU)

COURSE CODE: CPR 306

TOTAL SCORE: 70 MARKS

TIME ALLOWED: 2 hours

INSTRUCTION: Answer THREE (3) Questions. Question 1 is Compulsory (30 marks) and any other TWO (2) Questions (20 marks each)

QUESTION 1

- a. State four (4) advantages and three (3) disadvantages of surface drainage (7 marks)
- b. Explain briefly the hydrological or water cycle (8 marks)
- c. Differentiate between net and gross irrigation requirements (6 marks)
- d. Discuss the stages of growth affected by irrigation practice (9 marks)

QUESTION 2

- a. Write concisely on five (5) factors to be considered before reclamation or control of saline and alkaline soils (10 marks)
- b. What are the five (5) purposes of irrigation (10 marks)

QUESTION 3

- a. State five (5) units that require to be maintained in irrigation system (5 marks)
- b. Write short notes on these methods of controlling soil erosion (i) terracing (ii) contouring (iii) cover cropping (iv) tillage practices and (v) strip cropping (15 marks)

QUESTION 4

- a. Explain five (5) problems associated with irrigation programme (10 marks)
- b. Mention the four (4) major causes of soil acidity (4 marks)
- c. Define the term “soil erosion” (6 marks)