



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

EXAMINATION: 2021_2 POP EXAMINATION

COURSE TITLE: PRINCIPLES OF IRRIGATION AND DRAINAGE

COURSE CODE: CRP 306

TOTAL SCORE: 70 MARKS

TIME ALLOWED: 2hours 30minutes

INSTRUCTION: Answer FOUR Questions in All. Question 1 is compulsory (25marks) and any three questions (15 marks each)

Q1

- a. Define irrigation? And outline 5 of its purposes in Agriculture. (8marks)
- b. Describe irrigation scheduling and state three benefits derived from it. (9marks)
- c. What are the methods used in determining when to irrigate? Differentiate between them. (8marks)

Q2

- a. Briefly explain the relationship between soil, plant and atmosphere. (12marks)
- b. State two sources of irrigation resources. (3marks)

Q3

- a. List and Explain the types of irrigation requirement. (9marks)
- b. State 3 factors that determine water requirement of crops. (6marks)

Q4

- a. List and explain functional roles of water in crop growth. (10marks)
- b. State any five problems associated with irrigation. (5marks)

Q5

- a. Briefly explain the stages affected by irrigation practices. (9marks)
- b. List the three (3) phases of water. (6marks)

Q6

- a. Define water requirement of crop (6MARKS)
- b. Calculate the water use efficiency given the following crop water requirement and their yield. (9MARKS)

	Crop	Water requirement (mm)	Yield
	Rice	1200	4500
	Maize	625	5000