



NATIONAL OPEN UNIVERSITY OF NIGERIA
University Village, Nnamdi Azikiwe Expressway, Plot 91, Cadastral Zone,
Jabi, Abuja
Faculty Agricultural Sciences
2020_2 Examination

EXAMINATION: SECOND SEMESTER 2020_2 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. Derive a definite definition of irrigation and outline 5 of its uses in Agriculture. (8marks)
- b. Explain in brief irrigation scheduling and list three benefits derived from it. (9marks)
- c. Identify the methods used in determining when to irrigate and Differentiate between them. (8marks)

Q2

- a. Discuss the critical growth stage of crops and highlight the stages of growth affected by irrigation. (9marks)
- b. In a tabular form, show the critical growth stages of the following crops; sorghum, wheat, Maize, Cotton and bean. (6marks)

Q3

- a. Define water use efficiency (WUE) and outline the procedure for efficient water use in irrigation. (9marks)
- b. State the three (3) stages of water and the three (3) transformations involved in water cycle. (6marks)

Q4

- a. Identify the functional roles of water in crop growth and discuss each. (10marks)
- b. Outline any five challenges associated with irrigation in agriculture. (5marks)

Q5

- a. List the four principal surface water basins in Nigeria (6marks)
- a. Briefly define irrigation systems and carefully list all the types of irrigation systems available in Nigeria. (9marks)

Q6

- a. Discuss in irrigation the various types of maintenance. (7.5marks)

b. List the techniques of controlling soil erosion (7.5marks)