



ZIMBABWE

**MINISTRY OF HIGHER AND TERTIARY EDUCATION,
INNOVATION, SCIENCE AND TECHNOLOGY
DEVELOPMENT**

**HIGHER EDUCATION EXAMINATIONS COUNCIL
(HEXCO)**

NATIONAL CERTIFICATE

IN

WATER RESOURCES AND IRRIGATION ENGINEERING

MODULE: Irrigation Extension Services

PAPER NO: 384/22/M01

DURATION: 3 Hours

NOVEMBER / DECEMBER 2025 EXAMINATION

REQUIREMENTS

INSTRUCTIONS TO CANDIDATE

- 1. Answer any four (4) questions.**
- 2. All questions carry equal marks.**
- 3. Start each question on a fresh page.**
- 4. Do not write on question paper.**
- 5. Do not tear off any pages from answer booklet.**

QUESTION 1

Discuss the importance of stakeholder involvement in water engineering projects. (25 marks)

QUESTION 2

Explain potential conflicts likely to be experience amongst stakeholders in irrigation. Highlight different conflict resolution methods. (25 marks)

QUESTION 3

Explore the different training methods for stakeholders in an irrigation project. List the criteria you would use to choose training methods for various stakeholders. (25 marks)

QUESTION 4

- a) Define water efficiency (2 marks)
- b) Show your understanding of the following efficiencies applied in irrigation engineering:
 - i) Distribution efficiency (4 marks)
 - ii) Application efficiency (4 marks)
 - iii) Water use efficiency (5 marks)
 - iv) Conveyance efficiency (5 marks)
 - v) Overall efficiency (5 marks)

QUESTION 5

Critically analyse how one would assess the irrigation system performance. (25 marks)

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