



UNIVERSITY OF EDUCATION, WINNEBA
INSTITUTE FOR TEACHER EDUCATION AND CONTINUING
PROFESSIONAL DEVELOPMENT (ITECPD)



END-OF-SECOND SEMESTER EXAMINATIONS, NOVEMBER, 2023

LEVEL 400

COURSE CODE: JBA 482

COURSE TITLE: AGRICULTURE PROJECT

TIME ALLOWED: 2 HRS

STUDENT'S INDEX NUMBER: _____

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GENERAL INSTRUCTIONS:

- This paper is made up of ONE SECTION.
- The Section is made up of five essay type questions.
- Answer any THREE questions in your answer booklet.
- Each question carries equal marks. You are expected to start each question on a new page.
- You are expected to hand over your answer booklet to the invigilator before you leave the examination hall.

Instruction: Answer any three (3) questions in the answer booklet provided.

- 1a. List any five (5) sub-headings that must be included in the "Introduction" of a typical project work. (5 marks)
- b. Give two (2) examples of how you can construct an in-text citation with the following reference and extract (5 marks)

Essilfie, G. L., Lamptey, S., Baddoo, R. N., Amenorpe, G., Hevi, W., Owusu, M., & Atupra, F. (2023). Food safety in the horticultural sector in Ghana: Challenges, risk factors and interventions. *Frontiers in Sustainable Food Systems*, 7, 1173677. <https://doi.org/10.3389/fsufs.2023.1173677>

"The study revealed that enteric pathogens such as *Escherichia coli* and *Salmonella* spp. mainly contaminate produce through fresh manure and contaminated irrigation water used during the production of vegetables".

c. Examine any **four (4)** ways that make educational action research relevant
(10 marks)

2. Comfort, a maize farmer wants to evaluate the best maize variety in her seed bank using Randomized Complete Block Design (RCBD) with 4 blocks. The seeds are; A-var 1, B-var 2, C-var 3.

a. List the sources of variation for the experimental design used apart from the total error. (3 marks)

b. When does type I error occur? (2 marks)

c. Suggest a **null** and an **alternative** hypothesis for this experiment (4 marks)

d. How many experimental units are expected for this experiment? (2 marks)

e. Briefly explain why the farmer used RCBD and not CRD. (4 marks)

f. Draw a possible layout of the experiment (5 marks)

3. a. State and explain any **four (4)** steps or guidelines used to write a good problem statement (8 marks)

b. Explain how the following concepts below relate to educational action research

i. Reflective practice (2 marks)

ii. Participatory approach (2 marks)

iii. Collaborative Inquiry (2 marks)

iv. Cyclical Process (2 marks)

c. Differentiate between "Sampling" and "Sample" (4 marks)

4. a. State any **four (4)** characteristics of a good research problem (4 marks)

b. Describe **three (3)** ways a researcher can search for primary and secondary data sources. (6 marks)

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- c. State and explain any five (5) key components of chapter four of a typical project work (10 marks)
5. a. i. State four (4) major types of **non-probability** sampling (2 marks)
ii. State the sources of variation for Completely Randomized Design (3 marks)
- b. Literature review plays an important function in the research process. State and explain any five (5) importance of literature review (10 marks)
- c. Explain the following underlisted types of analysis in the chapter four of a project work
- i. Descriptive Analysis (2.5 marks)
- ii. Inferential Analysis (2.5 marks)

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