TECHNICAL UNIVERSITY OF MOMBASA

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF ARCHITECTURE & BUILT ENVIRONMENT

UNIVERSITY EXAMINATION FOR:

DEGREE IN BACHELOR OF ARCHITECTURE

EAR 4305: **BUILDING ECONOMICS**

SPECIAL/SUPPLEMENTARY EXAMINATION

YEAR THREE SEMESTER ONE

SERIES: JULY2025

TIME: 2 HOURS

DATE: JULY, 2025

Instructions to Candidates
You should have the following for this examination
-Answer Booklet, examination pass and student ID
This paper consists of **FIVE** questions. Attempt question ONE (Compulsory) and any other TWO questions.
Do not write on the question paper.

QUESTION ONE

Highlight and discuss some of the sustainable building issues dominating conversations in the 21st century. **(30 marks)**

QUESTION TWO

(a) Discuss the three common value management techniques adopted for construction projects. **(12 marks)**

(b) Describe the benefits of value management in projects. **(8 marks)**

QUESTION THREE

(a) Economic evaluations are carried out from a particular point of view. Briefly explain your understanding of this statement. **(5 marks)**

(b) Briefly, provide an overview of the steps necessary in carrying out a successful economic evaluation process in a built environment setting. **(15 marks)**

QUESTION FOUR

(a) For an investor's organization to make an investment decision, the investor must consider and determine a number of factors beforehand. Briefly discuss. **(10 marks)**

(b) Explain how there can be a trade-off between the maintenance and replacement of building components and plant. **(5 marks)**

(c) Explain the difference between economic depreciation and accounting depreciation. **(5 marks)**

QUESTION FIVE

(a) Cost benefit analysis is a decision making technique that assesses the positive outcomes (benefits) as well as the negative outcomes (costs) of different decision alternatives. Discuss **(10 marks)**

(b) Highlight the common factors of production in an economy including the expected returns for each of the factors identified. (**10 marks**)