



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

SCHOOL OF ENGINEERING AND TECHNOLOGY

**UNIVERSITY EXAMINATION FOR THE DEGREE IN SCIENCE IN
CONSTRUCTION MANAGEMENT**

2ND YEAR 2ND SEMESTER 2024/2025 ACADEMIC YEAR

CENTRE: MAIN CAMPUS

COURSE CODE: TCB 1202

COURSE TITLE: BUILDING TECHNOLOGY II

EXAM VENUE: LR 6 STREAM: BSc. CONSTRUCTION MGT

DATE: 14 /04/2025 EXAM SESSION:9-11.00 AM

DURATION: 2 HOURS

Instructions

- 1. Answer question 1 (Compulsory) and ANY other two questions**
- 2. Candidates are advised not to write on question paper**
- 3. Candidates must hand in their answer booklets to the invigilator while in the examination room.**

QUESTION ONE (30 MARKS) COMPULSORY

- a) What is formwork? Highlight any FIVE conditions that a good formwork should satisfy. (6 Marks)
- b) Differentiate pile foundation from pad foundation, stating when each is most preferred. (4 Marks)
- c) Sketch a staircase and detail its major elements. (10 Marks)
- d) What is a framed structure? State the different types. (5 Marks)
- e) Your client has approached you to help them decide whether to do a pitched roof or a flat roof for their new building. Advise them on your preference and why. (5 Marks)

QUESTION TWO (20 Marks)

- a) Highlight the functional requirements of roof covering. (6 Marks)
- b) Define underpinning and state when it is required? (4 Marks)
- c) Sketch and detail a suspended floor. (10 Marks)

QUESTION THREE (20 Marks)

- a) Differentiate false work from formwork, stating the role of each. (6 Marks)
- b) Of what significance is waterproofing over a roof? State how it can be done. (4 Marks)
- c) Highlight the materials used for formwork. (5 Marks)
- d) What are the possible causes of foundation failure? (5 Marks)

QUESTION FOUR (20 Marks)

- a) Floors can be divided into either ground or upper floor. State the functional requirements of a floor. (4 Marks)
- b) Define the following types of stairs; (6 Marks)
 - i. Straight stairs
 - ii. Quarter turn stairs
 - iii. Continuous stairs
- c) What is dewatering? Highlight the phases and methods involved. (10 Marks)

QUESTION FIVE (20 Marks)

- a) Failure of formwork may be collapse of the entire formwork, or part of it. State the possible causes of formwork failure. (5 Marks)
- b) Name any FOUR types of shallow foundations and state the function of foundations. (9 Marks)
- c) Describe how roof waterproofing can be done. (6 Marks)