



TECHNICAL UNIVERSITY OF MOMBASA

Faculty of Engineering and Technology
Department of BUILDING & Civil engineering
UNIVERSITY EXAMINATION FOR:
BACHELOR OF TECHNOLOGY IN CIVIL ENGINEERING

TCV 4412: CONSTRUCTION MANAGEMENT I

END OF SEMESTER EXAMINATION

SERIES: JULY 2025

TIME: 2 HOURS

Instructions to Candidates

You should have the following for this examination

-Exam 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 (COMPULSORY) 20 Marks

- a) State five major challenges faced in managing construction organizations. For each, briefly explain its impact on project delivery. (5 marks)
- b) Explain the following core functions of management in construction organizations. Provide a construction-related example for each: (4 marks)
 - i. Strategic Management
 - ii. Operational Management
 - iii. Project Management
 - iv. Behavior Regulation
- c) Discuss the differences between the three levels of management in construction firms. Explain how these levels collaborate to ensure project success. Use examples relevant to construction works in Kenya. (6 marks)
- d) Differentiate between open tendering and restricted tendering. (2 marks)
- e) Discuss three advantages of competitive tendering in public construction projects. (3 marks)

ANSWER ANY TWO QUESTIONS

QUESTION TWO (20 Marks)



- a) List any three forms of construction found in the Kenyan construction industry and provide one example of each. *(3 marks)*
- b) Briefly explain any four key characteristics of the construction industry and how each affects the management of projects. *(4 marks)*
- c) Explain the meaning of a fragmented construction industry. *(2 marks)*
- d) Identify any three categories of industry players and describe their roles in a typical project. *(3 marks)*
- e) Explain four ways in which the construction industry contributes to economic and urban development in Kenya. Support your answer with relevant local examples. *(4 marks)*
- f) You are a project engineer working on a rural road upgrade in Kenya. Heavy rains, material delays, and disputes between the contractor and consultant are affecting progress.
Using your understanding of the construction industry's nature and players:
 - i. Identify two types of risks affecting the project. *(2 marks)*
 - ii. Suggest two strategies a contractor can use to reduce these risks. *(2 marks)*

QUESTION THREE (20 Marks)

- a) List three key objectives of management in a construction project. For each, provide a brief explanation. *(3 marks)*
- b) State and explain four differences between formal and informal organization structures. *(4 marks)*
- c) Outline two reasons why effective organization is critical on a large construction site. *(2 marks)*
- d) Describe how poor management functions can negatively affect project performance in terms of time, cost, and quality. *(3 marks)*
- e) Discuss four reasons why the principles of management are important to a site supervisor in Kenya's construction sector. Use examples. *(4 mark)*
- f) You are supervising a concrete casting team on a bridge project. The work is falling behind schedule, workers are frustrated, and deliveries are delayed.
 - i. Identify two management functions that have likely been neglected. *(2 marks)*
 - ii. Suggest two immediate steps you would take to improve performance and restore morale. *(2 marks)*

QUESTION FOUR (20 Marks)

- a) List three categories of site personnel commonly found on a construction site and briefly describe the role of each. *(3 marks)*
- b) Explain the importance of discipline on a construction site and describe three common causes of indiscipline among construction workers. *(5 marks)*

- c) Define motivation in the context of construction site management. *(1 mark)*
- d) Identify and explain four ways a site manager can motivate workers to improve productivity and morale. *(4 marks)*
- e) Discuss any four characteristics of an effective construction site organization. *(4 marks)*
- f) You are assigned as the new assistant site manager on a busy road construction project. After your arrival, you notice a lack of teamwork among subcontractor crews and repeated safety breaches.
 - i. Identify two possible reasons for this breakdown in site organization. *(2 marks)*
 - ii. Suggest two leadership or communication strategies you would apply to restore coordination and improve safety. *(2 marks)*

QUESTION FIVE (20 Marks)

- a) Define the following terms as used in contract planning: *(3 marks)*
 - i. Project schedule
 - ii. Float
 - iii. Critical path
- b) Outline four components typically included in a construction project plan and briefly explain the purpose of each. *(4 marks)*
- c) Explain the significance of resource levelling in contract planning. *(2 marks)*
- d) Identify three consequences of poor labour or equipment scheduling on a construction site. *(3 marks)*
- e) Discuss four reasons why planning is critical before contract execution in civil engineering projects. Support each with a relevant Kenyan context example. *(4 mark)*
- f) You are supervising a road upgrade project in a rural area. The project is behind schedule due to machinery breakdown, fuel shortages, and unclear work sequences.
 - i. Identify two areas where planning was inadequate. *(2 marks)*
 - ii. Suggest two actions you would take to recover lost time and improve coordination. *(2 marks)*