



MACHAKOS UNIVERSITY

University Examinations for 2024/2025 Academic Year

SCHOOL OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF BUILDING AND CIVIL ENGINEERING

FIFTH YEAR FIRST SEMESTER EXAMINATION FOR DEGREE IN
BACHELOR OF SCIENCE IN CIVIL ENGINEERING

ECV 504: CONSTRUCTION MANAGEMENT

DATE: 15TH JANUARY, 2025

TIME: 11.00 AM – 1.00 PM

INSTRUCTIONS:

Answer question ONE (Compulsory) and any other TWO questions

QUESTION ONE (COMPULSORY) (30 MARKS)

- a) Define the following terms as used in Construction contract management.
 - i) Site variations orders
 - ii) Compensation Events
 - iii) Project cost management
 - iv) Liquidated damages
 - v) Performance security (5 marks)
- b) The Fayol theory is practiced by construction managers to organize and regulate the internal activities of an organization for efficiency. Based on Fayol's theory, describe FIVE major principles of construction management applicable in Kenya. (5 marks)
- c) Briefly describe the process of procurement of a large Civil Engineering contract starting from tender advertising to site possession. (10 marks)
- d) Project Cost control is one of the important process of monitoring and managing expenses in construction. It needs to be managed and be control along a life cycle of construction process to ensure the success of the project. Discuss FOUR key components of cost control management in a Civil Engineering Project. (10 marks)

QUESTION TWO (20 MARKS)

- a) Describe FIVE competitive procurement methods used to procure a large Civil project in Kenya (5 marks)
- b) A construction contract is a mutual or legally binding agreement between two parties based on policies and conditions recorded in document form. Based on this statement, state and describe FIVE major contract documents that constitute a construction contract. (5 marks)
- c) A procuring entity may use direct procurement as allowed under sub-section (2) of The Public Procurement and Asset Disposal Act, 2015 as long as the purpose is not to avoid competition. With aid of examples, briefly describe FIVE conditions in which one is authorize to use direct procurement method. (10 marks)

QUESTION THREE (20 MARKS)

- a) Define discounted cash flow and explain FIVE advantages and FIVE disadvantages of discounted cash flow. (10 marks)
- b) Explain Cost-benefit analysis and briefly describe on how to conduct a cost-benefit analysis in a construction organization. (10 marks)

QUESTION FOUR (20 MARKS)

- a) Apart from National Construction Authority (NCA), state and briefly outline the main function of FIVE other different Government statutory bodies directly involved in the regulation of construction industry in Kenya. (10 marks)
- b) National Construction Authority (NCA) was established under Act No.41 of 2011 Laws of Kenya. Briefly outline FIVE main functions of NCA as stipulated in the Act of parliament. (10 marks)

QUESTION FIVE (20 MARKS)

- a) Management by objectives (MBO) is a strategic management model that aims to improve the performance of an organization by clearly defining objectives that are agreed to by both management and employees. State and explain FIVE advantages and FIVE disadvantages of MBO management style in an organization. (10 marks)
- b) Project Planning is a very importance phase and it involves thinking before doing and deciding in advance what is to be done, what is to be done, how is to be done and who is do it. State and explain FIVE features of Planning and FIVE advantages of planning of a construction project. (10 marks)