



MACHAKOS UNIVERSITY
University Examinations for 2021/2022 Academic Year
SCHOOL OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF BUILDING AND CIVIL ENGINEERING
FIFTH YEAR FIRST SEMESTER EXAMINATION FOR
BACHELOR OF SCIENCE (CIVIL ENGINEERING)
ECV 504: CONSTRUCTION MANAGEMENT

DATE: 31/8/2022

TIME: 8.30-10.30 AM

INSTRUCTIONS:

- *This paper comprises of FIVE questions. Answer **THREE** questions*
- *Questions one is **Compulsory** and carries 30 marks*
- *Answer any other **TWO** questions*

QUESTION ONE (30 MARKS)

- a) Define the following terms as used in building construction management.
- i. Structural defect
 - ii. Cost benefit analysis
 - iii. Contract
 - iv. Discounted cash flow
 - v. Bill of Quantities (5 marks)
- b) State and explain FIVE functions of management (5 marks)
- c) An Engineering company may choose to leverage cost-benefit analysis as a part of their decision making process. There are several potential advantages and limitations that should be considered before relying entirely on a cost-benefit analysis. Briefly describe TWO advantages of cost-benefit analysis and THREE disadvantages of cost-analysis. (10 marks)
- d) Imagine you have been appointed as a Project Manager in a large construction Company leading a large group of technical human resource. For the success of your appointment, you are required to exercise some basic management practices. Briefly outline FIVE of the basic principles of project management relevant to the field of construction. (10 marks)

QUESTION TWO (20 MARKS)

- a) i. Define construction drawing (3 marks)
- ii. Describe FIVE types of construction drawings (5 marks)
- b) i. Define cost control (2 marks)
- ii. State and explain FIVE factors that are involved in monitoring cost control of a project. (10 marks)

QUESTION THREE (20 MARKS)

- a) Briefly describe FIVE documents that constitute building contract document. (10 marks)
- b) You have been appointed to initiate a new Government project by a Public Institution. State and explain FIVE methods of tender to consider during the procurement process of the works and services. (10 marks)

QUESTION FOUR (20 MARKS)

- a) State and briefly outline FIVE 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) Differentiate between Tender security and Performance bond (4 marks)
- b) Briefly describe the process of procurement of a large Civil Engineering contract starting from tender opening to tender award (6 marks)
- c) A bill of quantities is one of the main documents in a construction project. Briefly state and explain FIVE major importance of a priced Bill of quantities in the implementation of a project. (10 marks)