



**MASINDE MULIRO UNIVERSITY OF  
SCIENCE AND TECHNOLOGY  
(MMUST)**

**UNIVERSITY EXAMINATIONS  
2013/14 ACADEMIC YEAR**

**FOURTH YEAR FIRST SEMESTER EXAMINATIONS**

**FOR THE DEGREE OF  
BACHELOR OF SCIENCE IN CIVIL AND STRUCTURAL  
ENGINEERING**

**COURSE CODE:** CSE 461

**COURSE TITLE:** CONSTRUCTION MANAGEMENT I

**DATE:**

**TIME: 3 Hours**

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**INSTRUCTIONS:**

1. Answer Question 1 and any other three questions.
2. Provide neat sketches and diagrams where required.

**SECTION 1: Answer question 1 (25 marks)**

**QUESTION 1**

- (a) State the main agencies involved in the construction industry. Discuss the role played by each of these agencies. (5 marks)
- (b) Define the term 'Project management'. Explain the main functions of project management. (11 marks)
- (c) State the main contract documents applied in a civil engineering contracts. (5 marks)
- (d) With the aid of a neat sketch discuss the various phases of a project life cycle. (4 marks)

**SECTION 2: Answer any THREE questions (15 marks each)**

**QUESTION 2**

- (a) Discuss FIVE contract methods used in the implementation of civil engineering projects. (10 marks)
- (b) Explain the tendering procedures followed in the execution of civil engineering projects. (3 marks)
- (c) What is the purpose of an arbitration court? (2 marks)

**QUESTION 3**

- (a) What are 'Preliminary items' in a Bill of Quantities? Give examples of such items. (5 marks)
- (b) Differentiate between Prime cost sum and Provisional sum in a Bill of Quantities. (2 marks)
- (c) Compute the unit rate from the following bill item:

*'Excavate to reduced levels average thickness 300mm and cart away to a distance not exceeding 500m from site'*

Assume the following:

- Capacity of scrapper =  $5\text{m}^3$
- Allowance of bulking = 25%
- Round trip time for scrapper = 15 min.
- Cost of scrapper per hour = Kshs.3000/= (all inclusive)

(8 marks)

QUESTION 4

(a) Differentiate between book keeping and accounting. *(4 marks)*

(b) Explain the following accounting terms:

(i) Equities

(ii) Liabilities

(iii) Capital

(iv) Balance sheet

*(8 marks)*

(c) What is stock taking? Explain the process of stock taking.

*(3 marks)*

QUESTION 5

(a) Discuss the importance of carrying out a cost-benefit analysis before commencement of a construction project. How is it carried out? *(5 marks)*

(b) Explain the significance of surety bond and performance bond in a construction contract. *(4 marks)*

(c) What is the role of the following people in a construction project?

(i) Project manager

(ii) Site agent

(iii) Clerk of works

*(6 marks)*

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