



# TECHNICAL UNIVERSITY OF MOMBASA

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FACULTY OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF BUILDING AND CIVIL ENGINEERING

**UNIVERSITY EXAMINATION FOR:**

**BSC IN CIVIL ENGINEERING**

**ECE 2501 : ENGINEERING MANAGEMENT I**

**END OF SEMESTER EXAMINATION**

**SERIES: APRIL 2016**

**TIME: 2 HOURS**

**DATE: 9 May 2016**

## **Instructions to Candidates**

You should have the following for this examination

*-Answer Booklet, Drawing Instruments, Scientific calculator, examination pass and student ID*

This paper consists of five questions.

Attempt question ONE (Compulsory) and any other TWO questions.

Instructions to the candidates;

Answer question ONE, compulsory, and any other TWO questions.

Question ONE,

- a) outline the functions of the following parties in construction;
  - i) project manager
  - ii) Civil engineer. ( 8marks)
- b) "A civil engineer should be professionally above board with specific reference to work ethics," Discuss. (6marks)
- c) Discuss the significance of work study in construction work. (8 marks)
- d) Specify the remedies available to a party in a breach of contract. (8 marks)

QUESTION TWO

- a) Outline the work measurement procedure and state its application in the construction industry. (5marks)
- b) Explain the concept of rating and outline the following rating scales; i) 60/80, ii) 100/133. (5marks)
- c) The following workmeasurement observations were made in the field. Compute the standard times for all the activities;

Work measurement exercise; Fitting panels

Item description	Observed time (min.)	Rating
1) Collect tools, prep, and clear away	4.5	80
2) Collect panels	6.5	75
3 Fit sling	0.8	125
4) Hoist and guide panels	7.5	90
5) Hold panels and tighten clips	3.2	100
6) Admire scenery.	1.5	-
7) Transfer tackle	4.5	125

Start time 0.00

Stop time 0. 30

QUESTION THREE

- a) Outline the main project management processes. (10 marks)
- b) Discuss the following project management approaches;
  - i) Agile,
  - ii) Traditional,
  - iii) Critical chain project management. (10 marks)

QUESTION FOUR

- a) Explain the following terms as applied in contract law;
  - i) Invitation to treat,
  - ii) Privy of contract,
  - iii) Counter offer,
  - iv) Rescission. (6marks)
- b) Discuss the necessary requirements for the validity of a contract. ( 8 marks)

- c) Draw out a typical contract for a building project. ( show the essentials of the contract only.) (6 marks)

QUESTION FIVE

- a) Outline the following methods of tendering stating their merits and demerits.
  - i) Negotiated contracts,
  - ii) Turnkey projects,
  - iii) Serial contracting. (12 marks)

Outline the main stags of method study.

(8marks)=====

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