



TECHNICAL UNIVERSITY OF MOMBASA
FACULTY OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF BUILDING & CIVIL ENGINEERING
UNIVERSITY EXAMINATION FOR:
BACHELOR OF SCIENCE IN CIVIL ENGINEERING
ECE 2511: CIVIL ENGINEERING PRACTICE
END OF SEMESTER EXAMINATION
SERIES: SEPT 2017
TIME: 2 HOURS

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of five questions.

Answer question ONE (COMPULSORY) and any other TWO questions

Do not write on the question paper.

QUESTION ONE (COMPULSORY)

(a) Explain the following vitiating factors to a contract.

- i. Mistake as to the subject matter
- ii. Misrepresentation
- iii. Duress

(8 Marks)

b) Outline the remedies available for breach of contract

(10Marks)

(c) State the rules that govern each of the following elements of a valid contract.

- i. Offer
- ii. Acceptance
- iii. Consideration

(12Marks)

ATTEMPT ANY TWO QUESTIONS

QUESTION TWO

(a) Define a specification and outline three objects of a specification **(4Marks)**

(b) Write a specification for reinforced concrete 1:2:4/20mm Agg. **(16 Marks)**

QUESTION THREE

(a) Distinguish a nominated subcontractor from a domestic (general) subcontractor.

(2Marks)

(b) Define the term *variation* as used in building and civil engineering projects

(2Marks)

(c) Describe FOUR types of tendering methods used in building and civil engineering projects

(10 Marks)

(d) Explain the following payment certificates to the contractor in any given project.

- i. Interim
- ii. Penultimate
- iii. Final

(6 Marks)

QUESTION FOUR

(a) Define the following terms:

- i. Performance bond
- ii. Bid bond
- iii. Privity to a contract
- iv. Tender
- v. Conditions of contract
- vi. Liquidated damages
- vii. Tender form
- viii. Front loading

(8 Marks)

(b) Describe the following as used in preparation of a Bills of Quantities

- i. Working up
- ii. Squaring
- iii. Abstracting
- iv. Taking off
- v. Dotting on

(5Marks)

(c) Define arbitration and state five advantages of arbitration over court process

(7 Marks)

QUESTION FIVE

(a) Explain each of the following sums as applied in civil engineering quantities.

- i. Provisional
- ii. Prime cost
- iii. Contingency

(6 Marks)

(b) Highlight FOUR roles of an engineer/quantity surveyor in each of the following stages of a construction project

- i. Pre-tender
- ii. Pre-contract
- iii. Contract

(12 Marks)

(c) State TWO methods of discharge of contract

(2Marks)