



TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF ENGINEERING AND TECHNOLOGY

DEPARTMENT BUILDING AND CIVIL ENGINEERING

UNIVERSITY EXAMINATION FOR:

BSC IN CIVIL ENGINEERING

ECE 2511: CIVIL ENGINEERING PRACTICE

END OF SEMESTER EXAMINATION

SERIES: APRIL 2016

TIME: 2 HOURS

DATE: 12 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.

QUESTION ONE (20 MARKS)

- a) i) What is a bond?
ii) Describe any three types of bonds (7 Marks)
- b) Explain the following terms as used in civil Engineering contracts (9 Marks)
- i. Provisional sums
 - ii. Prime cost sum
 - iii. Day work
- c) Give a brief description of any four contract documents (4 Marks)

QUESTION TWO (20 MARKS)

- a) i) State the purposes of a Bill of Quantities for Civil Engineering works
ii) State the differences between the Bill of Quantities for Civil Engineering works and Building works (6 Marks)
- b) Describe the following types of contracts as used in Civil Engineering and state any two advantages and disadvantages of each respectively (14Marks)
- i. Bill of Quantities contract
 - ii. Lump sum Contract
 - iii. Cost plus fixed fee contract
 - iv. Cost plus fluctuating fee contract

QUESTION THREE (20 MARKS)

- a) Distinguish between contractual and extra-contractual claims in civil Engineering projects (6 Marks)
- b) Define Arbitration and state its merits and demerits (6 Marks)
- c) Describe the procedure of appointment of a sole Arbitrator by agreement (8 Marks)

QUESTION FOUR (20 MARKS)

- a) Outline the purposes of specifications in civil Engineering contracts (5 Marks)
- b) Write brief specifications for the following civil Engineering materials (15 Marks)
- i. Cement
 - ii. Coarse aggregates
 - iii. Fine aggregates

QUESTION FIVE (20 MARKS)

- a) State any four rules of each of the following essential elements of contract (12 Marks)
- i. Offer
 - ii. Acceptance
 - iii. Consideration
- b) Discuss the remedies available to the plaintiff for breach of contract (6 Marks)
- c) State any four factors that may render consent unreal during contract agreement (2 Marks)