



TECHNICAL UNIVERSITY OF MOMBASA

Faculty of Engineering & Technology

DEPARTMENT OF BUILDING & CIVIL ENGINEERING
UNIVERSITY EXAMINATION FOR BACHELOR OF SCIENCE IN CIVIL
ENGINEERING
[Institutional Based Programmes]

ECE 2509: ENGINEERING MANAGEMENT II

END OF SEMESTER EXAMINATION
SERIES: APRIL 2013
TIME: 2 HOURS

Instructions to Candidates:

You should have the following for this examination

- *Answer Booklet*

This paper consists **FIVE** question in **TWO** sections **A & B**

Attempt question **ONE** in section **A** and any other **TWO** from section **B**

Maximum marks for each part of a question are as shown

This paper consists of **TWO** printed pages

SECTION A (Compulsory)

Question One

- a) Discuss the morals and ethics of a civil engineer as pertains to the following:
- (i) Technical/Engineering work specifications
 - (ii) Engineering material specifications
 - (iii) Monitoring/controlling and implementation of a project
 - (iv) Environmental dictates
 - (v) Procurement of Civil Engineering Work

SECTION B (Attempt any TWO questions)

Question Two

Contrast the following two methods of work procurement, highlighting the main features, the strength and weaknesses of each method.

- (i) Open tendering method
- (ii) Negotiated contracts **(20 marks)**

Question Three

- a) Discuss the application of work study in civil engineering projects. **(8 marks)**
- b) Discuss the following aspects of work measurement:
 - Relaxation allowances and contingencies
 - Rating
 - Synthetics
 - Analytical estimating **(12 marks)**

Question Four

- a) Outline the main roles of a resident engineer in a construction project **(8 marks)**
- b) Describe the working relationship of a project engineer viz-a-viz the following parties in a construction project: **(12 marks)**
 - (i) The architect
 - (ii) The local authority
 - (iii) The quantity surveyor
 - (iv) The contractor

Question Five

- a) Describe the main facets of project management **(8 marks)**
- b) Outline the following three methods of project management:
 - (i) The traditional approach
 - (ii) The PRINCE
 - (iii) Critical chain project management (CC PM) **(12 marks)**