



TECHNICAL UNIVERSITY OF MOMBASA

**Faculty of Engineering &
Technology in Conjunction with
Kenya Institute of Highways and
Building Technology (KIHBT)**

DEPARTMENT OF ELECTRICAL & ELECTRONIC ENGINEERING

HIGHER DIPLOMA IN ELECTRICAL & ELECTRONIC ENGINEERING

BLC 3202: ESTIMATING TENDERING & ENGINEERING SERVICES CONTRACT

SPECIAL/SUPPLEMENTARY EXAMINATION

SERIES: AUGUST 2014

TIME: 2 HOURS

Instructions to Candidates:

You should have the following for this examination

- *Answer Booklet*
- *A non-programmable Scientific Calculator*

This paper consists of **FIVE** questions. Answer any **THREE** questions

All questions carry equal marks

Maximum marks for each part of a question are as shown

This paper consists of **THREE** printed pages

Question One

- a) State:
- (i) The technical factors which affect tender prices. (4 marks)
 - (ii) TWO advantages of estimating or cost planning for implementation of a construction project. (4 marks)
- b) Define Tender Appraisal (2 marks)
- c) Distinguish between Estimating and Tendering. (4 marks)
- d) Explain why profit calculation is spread over in the Bill of Quantities, during the tender bidding process for inclusion in the Tender-sum. (6 marks)

Question Two

- a) Distinguish the following programme ordering documentation for contract supplies:
- (i) Purchase order
 - (ii) Quotation
 - (iii) Delivery note
 - (iv) Invoice (8 marks)
- b) Define:
- (i) Work measurement
 - (ii) Method study (4 marks)
- c) State the objectives of b (i) and (ii) above. (4 marks)
- d) State all the steps in taking a good time study. (4 marks)

Question Three

- a) An organization undertook a project with activities as listed in table 1 below:

Activity	Duration (Month)	Mode Numbers
A	1	1-2
B	2	1-3
C	2	1-4
D	3	2-5
E	0	3-6
F	3	3-7
G	2	4-7
H	1	5-6
I	2	5-8
J	4	6-9
K	2	6-10
L	3	7-10

M	2	8-9
0	2	9-10
0	1	10-11

Figure 1

By using Network Analysis:

- (i) Determine the project duration **(8 marks)**
- (ii) Determine the float for activities F and L **(4 marks)**

b) Describe the following terminologies as used in Network analysis for project programme planning for implementation:

- (i) Event
- (ii) Dummy activity
- (iii) Float
- (iv) Work Breakdown Structures (WBS) **(8 marks)**

Question Four

a) Define:

- (i) Law of TORT
- (ii) TORT

b) Explain the following types of TORT:

- (i) Strictly liability TORT
- (ii) Negligence
- (iii) Nuisance
- (iv) Defamation

c) Explain each of the following clauses as used in contracts:

- (i) Liquidated damages clause
- (ii) Arbitration clause
- (iii) Choice of law and forum clause **(6 marks)**

d) Distinguish between Natural Law and Man's Law **(2 marks)**

Question Five

a) Distinguish between the following in a contract:

- (i) Main Contractor
- (ii) Sub-Contractor
- (iii) Clerk of works
- (iv) Project Manager **(8 marks)**

b) Explain the following malpractices which demonstrate abuse of Tendering Procedures:

- (i) Lead time
- (ii) Long list of contenders **(4 marks)**

c) Explain the following terms as implied in contracting

- (i) Commencement of work

(ii) Extension of time

(iii) Completion of certificate
marks)

(6

d) Explain why it is necessary to clarify ambiguities and uncertainties on the construction site before fixing the Tender sum **(2 marks)**