



# TECHNICAL UNIVERSITY OF MOMBASA

## *Faculty of Engineering and Technology*

DEPARTMENT OF ELECTRICAL AND ELECTRONIC ENGINEERING  
*Faculty of Engineering and Technology*

### DIPLOMA IN TECHNOLOGY ELECTRICAL POWER ENGINEERING

EEP 2309: ESTIMATING, TENDERING AND ENGINEERING SERVICES CONTRACTS

SERIES: SEPT 2017

TIME: 2 HOURS

#### INSTRUCTIONS TO CANDIDATES:

1. You should have the following for this examination
  - Answer booklet
  - Electronic calculator
  - Student ID
  - Examination pass
2. This paper consists of FIVE questions.
3. Answer ANY THREE questions.
4. All questions carry equal marks.
5. Do not write on the question paper

This paper consists of THREE printed pages

#### QUESTION ONE

- a) Define;
  - i. TORT
  - ii. LAW OF TORT (2mks)
- b) Explain the following types of TORT
  - i. Negligence TORT
  - ii. Strictly liability TORT
  - iii. Intentional TORT (5mks)
- c) Explain the following sources of law

- i. Judiciary precedent
  - ii. Custom
  - iii. Equity (5mks)
- d) Explain the following clauses in solving disputes in contracts
- i. Choice of law and forum clause
  - ii. Arbitration clause
  - iii. Liquidated damages clause (5mks)
- e) Explain the following essentials for a valid contract
- i. Consideration
  - ii. Intention to create legal obligations (3mks)

## QUESTION TWO

- a) In relation to construction site meetings for Adhoc meetings, state;
- i. The purpose
  - ii. The convenor
  - iii. The parties to attend (6mks)
- b) Explain why each of the following meetings may be preferred to over the other in a construction site.
- i. Formal meeting
  - ii. Adhoc meeting (6mks)
- c) Explain the term ‘work measurement’ as a technique of measuring work in work study (2mks)
- d) Explain the following techniques of measuring physical work.
- i. Piece work
  - ii. Hourly rate
  - iii. Fixed time (6mks)

## QUESTION THREE

- a) Distinguish the following program ordering and associated documentation for material supplies to contracting companies
- i. Purchase order
  - ii. Quotation
  - iii. Delivery note
  - iv. Invoice (8mks)
- b) Define the following in project site control and administration
- i. Work measurement
  - ii. Method study (4mks)
- c) State the objectives of b(i) and b(ii) above (4mks)
- d) Explain the following procedures in details in project site administration
- i. Formal meetings
  - ii. Adhoc meetings (4mks)

## QUESTION FOUR

- a) Define tender appraisal (2mks)
- b) Describe the following terms as used in supplies department of any organization.
- i. Trade discount
  - ii. Specification
  - iii. Proforma invoice (6mks)
- c) Distinguish the following identities in engineering contracts
- i. Main contractor
  - ii. Clerk of work
  - iii. Sub-contractor (6mks)
- d) Explain the following terms as implied in contracts
- i. Duress
  - ii. Mistake
  - iii. Mis-representation (3mks)

### QUESTION FIVE

- a) Using suitable sketches explain the organization of the following planning tools,
- i. C.P.M
  - ii. W.B.S
  - iii. Grantt chart (3mks)
- b) Define the following terminologies as used in network analysis for project planning for implementation.
- i. Dummy project
  - ii. Events
  - iii. Float
  - iv. Network (4mks)
- c) An organization undertook a project with activities as listed in the table 1 below.

ACTIVITY	DURATION MONTHS	NODE NUMBERS
A	2	1-2
B	3	1-3
C	2	1-4
D	5	2-5
E	0	3-6
F	4	3-7
G	3	4-7
H	3	5-6
I	5	5-8
J	2	6-9
K	2	6-10
L	3	7-10
M	2	8-9
N	3	9-10

O	2	10-11
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By using Network analysis;

Determine;

- i. The project duration
- ii. The critical path in the network
- iii. The floats for activities F and H (13mks)