



# **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**

**END OF SEMESTER EXAMINATION**

**SERIES: DECEMBER 2016**

**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

## PAPER ONE

### QUESTION ONE

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

### QUESTION TWO

- a) In relation to contracting, define;
- i. A Tort
  - ii. Invitation to tender (2mks)
- b) Distinguish between libel and slander in the TORT of defamation (3mks)
- c) Explain and give typical examples in the following types of TORT
- i. Intentional TORT
  - ii. Strictly liability TORT
  - iii. Negligence TORT (3mks)
- d) Explain the following sources of law
- i. Judicial precedent
  - ii. Common law
  - iii. Custom (6mks)
- e) Explain each of the following clauses used in contracts.
- i. Arbitration clause
  - ii. Choice of law and forum clause
  - iii. Liquidated damages clause (6mks)

### QUESTION THREE

- a) List any TWO sources of PRIME costs in project estimation (2mks)
- b) State any THREE types of tendering (3mks)
- c) Explain any THREE possible remedies for breach of contracts (3mks)
- d) Explain any FOUR factors considered when selecting the best possible technical services provider for an organization. (6mks)
- e) Explain FOUR circumstances under which a valid contract may be rendered void.

**QUESTION FOUR**

- a) Distinguish by the use of suitable sketches, the main differences between BAR CHART and GANTT CHART in project implementation planning. (3mks)
- b) Describe the following terminologies as used in Network analysis for project program planning for implementation.
- i. Event
  - ii. Dummy activity
  - iii. Float
  - iv. Work breakdown structures (W.B.S) (8mks)
- c) An electrical **sub-contractor** undertook a small project with the following activities as listed in the table below; by using Network analysis.
- i. Determine the project direction (6mks)
  - ii. Determine the float for activities E,G and K. (3mks)

ACTIVITY	DURATION MONTHS	NODE NUMBERS	ACTIVITY	DURATION MONTHS	NODE NUMBERS
A	1	1-2	I	2	5-8
B	2	1-3	J	4	6-9
C	2	1-4	K	5	6-10
D	3	2-5	L	3	7-10
E	0	3-6	M	4	8-9
F	3	3-7	N	2	9-10
G	2	4-7	O	1	10-11
H	1	5-6			

**QUESTION FIVE**

- a) Distinguish between the following in a contract.
- i. Main contractor
  - ii. Project manager
  - iii. Sub-contractor
  - iv. Clerk of works (6mks)
- b) Explain the following malpractices which demonstrate abuse of tendering procedures.
- i. Lead time
  - ii. Long list of contenders
  - iii. Tender which will never materialize (6mks)
- c) Explain the following terms as implied in contracts.
- i. Commencement of work
  - ii. Completion certificate
  - iii. Extension of time (6mks)
- d) Explain why it is necessary to clarify ambiguities and uncertainties on construction site before fixing the tender sum by contractors. (2mks)