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 EGINEERING 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 TWO

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.   Profor ma 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

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)