



TECHNICAL UNIVERSITY OF MOMBASA

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

DEPARTMENT OF ELECTRICAL AND ELECTRONIC ENGINEERING

UNIVERSITY EXAMINATION FOR 2017/2018:

HIGHER DIPLOMA IN TECHNOLOGY
ELECTRICAL POWER ENGINEERING

EEE 3205: ENGINEERING MANAGEMENT & PROFESSIONAL PRACTICE I

END OF SEMESTER EXAMINATION

SERIES: DECEMBER 2017

TIME: 2 HOURS

DATE: Pick Date Select Month Pick Year

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of **FIVE** Questions; each question carries 20 Marks. Attempt any **THREE** Questions.

Do not write on the question paper.

QUESTION ONE

- (a) Define the term Contract. (2 marks)
- (b) Explain the following terms as implied in contracts
- (i) Variation
 - (ii) Completion certificate
 - (iii) Extension of time (6 marks)
- (c) Explains the following terms as essentials for a valid contract
- (i) Consideration
 - (ii) Consent
 - (iii) Contractual capacity (6 marks)
- (b) Explain the following in profits
- (i) Cost-reimbursement contract
 - (ii) Selective tender
 - (iii) Package deal contract (6 marks)

QUESTION TWO

- a. Describe any **three** objectives of network analysis in an engineering project implementation planning. (6 marks)
- b. Describe the following terminologies as used in network analysis for project programme planning for implementation.
- (i) Work breakdown structures (WBS)
 - (ii) Dummy activity
 - (iii) Float
 - (iv) Event (8 marks)
- c. A certain Engineering project had activities, costs and precedence as shown in the **Table Q2** below.

ACTIVITY	PERIOD (Yrs)	COST	PROCEDURES
A	3	2M	NONE
B	4	3.8 M	NONE
C	2	5 M	A
D	1	1 M	A
E	4	7.5 M	B
F	1	0.5 M	CDE
G	½	0.5 M	F

Table Q2

Construct the critical path method network and determine:-

- (i) The critical path of the project
- (ii) The total cost of the project **(6 marks)**

QUESTION THREE

- (a) State:-
 - (i) Any three advantages of breakdown of maintenance
 - (ii) Three needs of insurance cover that could arise as stated in insurance and licensing legalities.
 - (iii) The duties of an operations manager as his defined responsibilities. **(6 marks)**
- (b) Draw the maintenance provision graph and explain the point of optimum maintenance in the graph. **(6 marks)**
- (c) With an aid of a diagram, discuss the maintenance cycle for a large manufacturing organization **(4 marks)**
- (d) Explain any two functions of an inspection department in a manufacturing organization. **(4 marks)**

QUESTION FOUR

- (a) Define the following terms as used in project management
 - (i) Project
 - (ii) Project appraisal **(4 marks)**
- (b) Briefly explain the term planning in project management. **(3 marks)**
- (c) Explain any four qualities of a good project manager **(8 marks)**
- (d) Distinguish between management and administration. **(2 marks)**
- (e) Define the following as used in projects
 - (i) Project proposal
 - (ii) Monitoring and evaluation
 - (iii) Project cycle **(3 marks)**

QUESTION FIVE

- (a) Explain any TWO benefits that may be realized by a firm practicing method study. **(4 marks)**
- (b) Explain the following methods of production stating one example in each case
- (i) Flow
 - (ii) Batch
 - (iii) Job **(6 marks)**
- (c) Explain any three functions of an inspection department in a manufacturing organization. **(3 marks)**
- (d) i. Briefly explain the term statistical Quality control (S.Q.C) **(4 marks)**
- ii. State any three advantages of d (i) above **(3 marks)**