



College of Engineering, Science and Technology (CEST)
School of Electrical and Electronic Engineering

TRADE DIPLOMA IN TELECOMMUNICATION ENGINEERING

FINAL EXAMINATION - TRIMESTER 3, 2015

EEE585 ENGINEERING MANAGEMENT

Date: Wednesday, 2nd December, 2015

Time: 2 pm to 5.10 pm

Room: A block

Instructions to candidates:

1. You are allowed 10 minutes Extra reading time during which you are NOT to write.
2. Begin each question on a fresh page and use both sides of the sheet.
3. Write your candidate – number at the top of each attached sheet.
4. Insert all written foolscaps, drawing paper, etc. in their correct sequence and secure with string.
5. For all sheets of paper on which rough/draft work has been done, cross it through and ATTACH to your answer scripts.
6. Write clearly the number(s) of the question(s) attempted on the top of each sheet.
7. There are six (6) questions altogether. One (1) in Section A and five (5) in Section B. Section A is compulsory. ANSWER ONLY FOUR QUESTIONS in Section B. Each question carry equal marks and are indicated clearly for each question and for each part of the questions.
8. No programmable calculators are permitted into the examination room.



Section A (Compulsory)

Question 1 (20 marks)

- (a) Write a brief outline of the history of engineering project management and make references to its original fields of application, the name Gantt, Taylor’s theory, the beginning of modern project management era, project schedule models etc.. (6 marks)
- (b) List the main stages in engineering project development and outline briefly what they involve. (10 marks)
- (c) Engineering Project Management needs skills and tools. Name eight of these management tools (4 marks)

Section B (Do only four (4) questions from this section)

Question 2 (20 marks)

- (a) Give the traditional constraints in engineering project management and describe each briefly. (8 marks)
- (b) Finance can be broken into three different categories. Name the categories and describe each briefly and concisely. (6 marks)
- (c) A project involves eight (8) activities identified by the code letters given in table 2c below.
Table 2c identifies the work breakdown structure in sequence in which the activities must be undertaken. Construct a network for the project.

Activity	Code Letter of Any Immediately Preceding Activity or Activities
a	-
b	-
c	b
d	-
e	a
f	a, c, d
g	a, c, d
h	f, g

Table 2c.

(6 marks)



Question 3 (20 marks)

- (a) Write an account on any **one** of the two integrating trend in modern management theory namely system approach and contingency approach. (5 marks)
- (b) What is engineering project monitoring and can such a task be monitored? Write clearly about project monitoring and describe clearly what are involved. (9 marks)
- (c) Briefly explain **two** advantages and **two** disadvantages of the use of standard and model form contracts as the basis of a legally binding agreement between two organisations. (6 marks)

Question 4 (20 marks)

- (a) Write a short account of the factors that make an engineering project a success. Mention also the important things that this success depend on. (6 marks)
- (b) Give a brief account of a project budget and state how a project manager can keep track and control of the project cost and the validity of the S-curve. (5 marks)
- (c) Earned value management system (EVMS) is very important in the management and measurement of success of engineering projects. Name and explain briefly the significance of the three pieces of information that are normally compared in EVMS. (6 marks)
- (d) If the Budget-at Completion (BAC) is \$1 million and the Cost Performance Index (CPI) is 0.9, calculate the Estimate –at-Completion (EAC). (3 marks)



Question 5 (20 marks)

- (a) State the major differences between goods and services. What is the significance of service-level agreement (SLA) in this differences. (6 marks)
- (b) Identify and describe briefly the function of management. (7 marks)
- (c) A student in the final year of a medical degree programme is selected to represent the country in a regional competition. The competition for his events take place on the day of his major paper in surgery. What shall be your decision as his Head of School? Write notes to support your decision. (7 marks)

Question 6 (20 marks)

- (a) (i) Give the three types of planning and describe briefly the intensions and two basic elements that each type incorporates.
(ii) Write a short definition of feasibility studies and name and describe briefly two type that are available for all to use. (8 marks)
- (b) The Net Present Value (NPV) of an invested sum of money is important to an investor. Complete the table 6b below for the meaning and the decision for the value of NPV.

If...	It means...	Then... (decision)
NPV>0		
NPV<0		
NPV = 0		

Table 6b.

(6 marks)



Question 6 (continued...)

- (c) The closing prices of an item with Company Bongo from May 19 to 23, 2014 were as in table 6c below.

Date	Closing Prices (\$)
May 19	91.89
May 20	91.35
May 21	91.27
May 22	91.84
May 23	91.91

Table 6c.

Calculate the moving averages and the weighted moving averages of the company Bongo in this 5 day period.

(6 marks)

The End