



COLLEGE OF ENGINEERING, SCIENCE & TECHNOLOGY

SCHOOL OF ELECTRICAL & ELECTRONIC

ENGINEERING

TRADE DIPLOMA IN ELECTRICAL ENGINEERING

STAGE 4

EEE585–ENGINEERING MANAGEMNT

TRIMESTER 1 - 2016.

DAY/DATE: FRIDAY, APRIL 29, 2016 TIME: 2.00 to 5.10pm ROOM: As per timetable.

Instructions to candidates:

1. You are allowed 10 minutes Extra reading time during which you are NOT to write.
2. Begin each answer 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 sheets in their correct sequence and secure with string.
5. For all sheets of paper on which rough/draft work has been done, cross it though and you MUST 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. ANSWER ALL QUESTIONS. the marks are indicated clearly for each question and for each part of the questions.
8. Show all workings where necessary.
9. Do not use programmable calculators.
10. **CHECK YOUR WORK BEFORE YOU LEAVE THE ROOM!**

Question 1

(20 marks)

(a) Engineering management is the intersection of management and technology. Give the three main areas which engineering management focuses on and describe each clearly to show its significance.

(10 marks)

(b) It is noticed that managing in the twenty first century has evolved dramatically. Write a brief account of the trends involved that are most likely to impact the management process in future.

(10 marks)

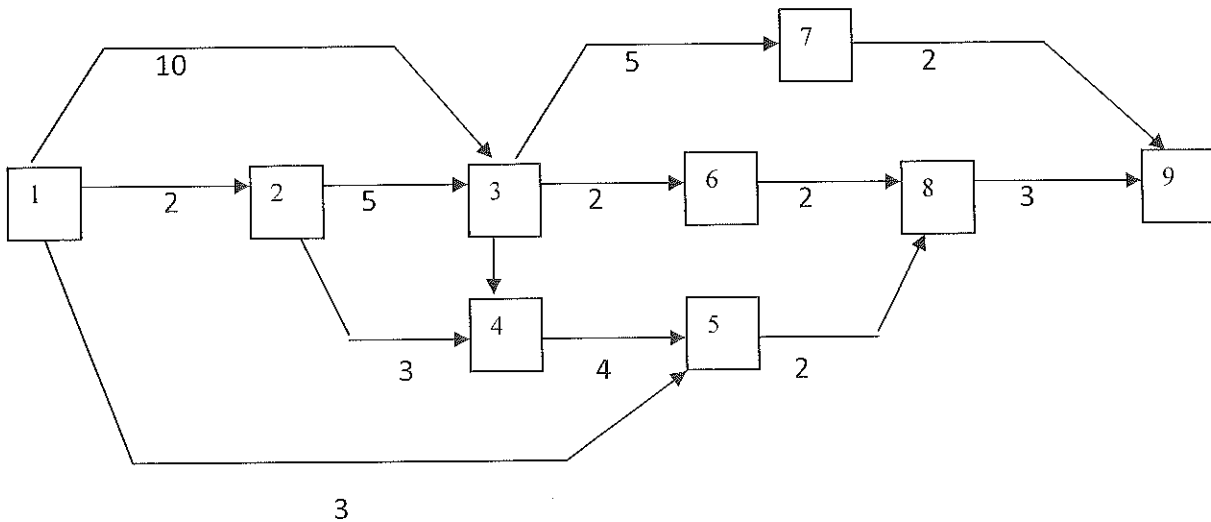
Question 2

(16 marks)

(a) Name the normal constraints in engineering project management and describe each briefly.

(8 marks)

(b (i) Analyse the following critical path network (Figure 1) network to determine the earliest and latest event time and the minimum project time. Indicate the critical path of the project. Activity times, in days are shown beneath each activity.



3
Figure 1

(ii) What amount of free float, if any, is associated with activity 6 – 8?

(8 marks)

Question 3 (16 marks)

Some model forms of contracts may be used by buyers and sellers as the basis for their contractual agreement.

- (a) Provide examples of model contract forms and outline briefly where they are most likely to be used.

(6 marks)

- (b) Name and 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.

(10 marks)

Question 4 (16 marks)

- (a) Write a short comparative account on of the two integrating trend in modern management theory namely system approach and contingency approach.
(Note: clarity and mention of distinct advantages of one over the other shall draw credits.)

(6 marks)

- (b) Describe briefly the Fayol Theory in Behavioral Management and mention only four significance of his theory.

(5 marks)

- (c) The leader of an academic division of a training institute decided to a give a pass terminating to a trainee who failed the final exam of a compulsory paper in the final year of the course so that the student can graduate. Although there is no provision in the academic regulations under examination for pass termination, the leader went ahead despite the advice from senior members of department which provides the full training for the trainee. Discuss and state whether you agree or disagree with the leader of the division.

Write notes to support the inclination of your decision.

(5 marks)

Question 5 (16 marks)

(a) Managers are also called upon to be project managers since duties are viewed as business venture in modern days managing approaches. Give six skills required of a manager called to this role.

(3 marks)

(b) Briefly account of a project budget and how can a project manager monitor and control of the project cost. State the validity of the S-curve in project budget monitoring system

(5 marks)

(c) Earned value management system (EVMS) bears a lot of importance in the management and measurement of success of entrepreneurial projects. What are the significance of the three pieces of information that are normally compared in EVMS and briefly explain each one?

(8 marks)

Question 6 (16 marks)

(a) (i) In engineering management, how important is project organization?
(ii) Give your view on the statement that Cash Flow Statement is an important part of a business financial planning.

(9 marks)

(b) In engineering management financial application a simple moving averages(SMA) is the unweighted mean of the previous n data. If those prices are as follow :

$$P_m, P_{m-1}, \dots, P_{m-(n-1)}$$

- (i) Give the formula for calculating the simple moving average (SMA)
- (ii) What is the SMA today in terms of yesterday's and the old values? (*Note: Giving a formula for its calculation is sufficient*)
- (iii) What's the difference between moving average and weighted moving average?

(7 marks)

The End