



COLLEGE OF ENGINEERING, SCIENCE & TECHNOLOGY
SCHOOL OF ELECTRICAL & ELECTRONIC

ENGINEERING

TRADE DIPLOMA IN ELECTRICAL ENGINEERING (Telecommunication & Networking
Engineering & Electronics & Instrumentation Engineering) - STAGE 5

EEE585-ENGINEERING MANAGEMNT

TRIMESTER 2 - 2018

DAY/DATE: FRIDAY, AUGUST 17th, 2018 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.

Question 1

(20 marks)

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

(8 marks)

(b (i) Study 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.

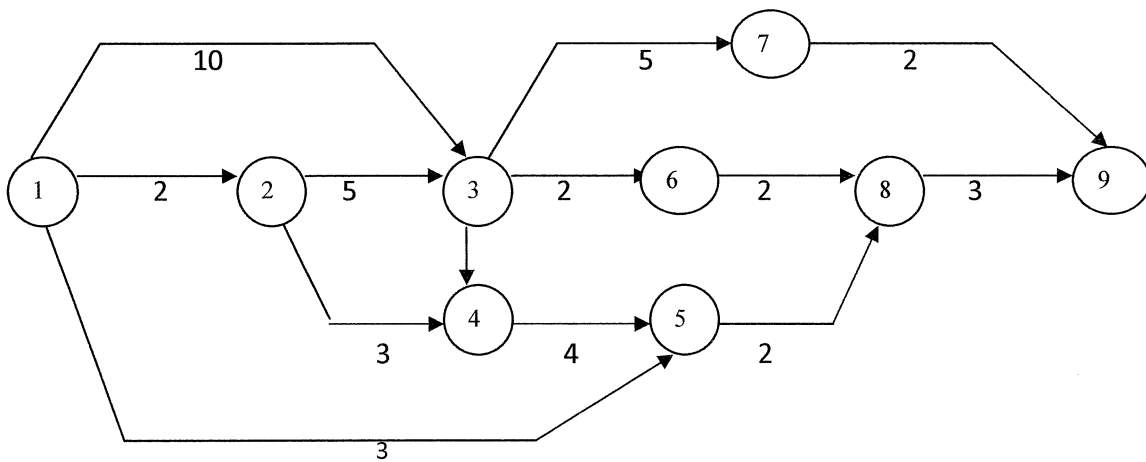


Figure 1

(ii) The cost required for each activity is given in table 1:

Activity	Cost (\$) per day
1-2	50
1-3	70
1-5	10
2-3	30
2-4	15
3-6	20
3-7	20
4-5	35
5-8	30
6-8	50
7-9	20
8-9	80

Table 1.

(a) What shall be the total cost of this project?.

(b) Suppose you crash activity 8 – 9 by one day. What will be the total cost now?

(12 marks)

Question 2 (16 marks)

(a) It is always stated that 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.

(8 marks)

(b) It is noted that managing in the twenty first (21st) century has evolved dramatically. Write a short account of the trends involved that are most likely to influence the management process in future.

(8 marks)

Question 3 (16 marks)

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

(a) Give examples of contract forms models and briefly outline where they are most likely to be used.

(6 marks)

(b) Give and explain **two** advantages and **two** disadvantages for the use of standard and model contract form as the basis of a legally binding agreement between two organisations.

(10 marks)

Question 4 (16 marks)

- (a) Write a short comprehensive account on one of the two integrating trend in modern management theory which are known as system approach and contingency approach. *(Note: clarity and mention of distinct advantages or disadvantages of one over the other shall draw credits.)*
(6 marks)
- (b) Briefly describe the Fayol Theory in Behavioral Management and mention only four significance of his theory.
(5 marks)
- (c) The leader of an academic section of a training institute decided to a grant a pass terminating to a trainee who failed the final exam of a compulsory paper in the final year of the program so that the student can graduate. Although there is no provision in the students academic regulations under examination for pass terminating, the leader went ahead despite the advice from senior members of the department which provides the full training for the trainee. Discuss and state whether you agree or disagree with the leader of the division.
(5 marks)

Question 5 (16 marks)

- (a) Other managers are sometimes called upon to be project managers since duties are viewed as a business venture in modern days managing approaches. Name six skills required of a manager being called upon to this role.
(3 marks)
- (b) Write briefly on project budget and how a project manager can monitor and have 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 these three pieces of information that are normally compared in EVMS?
(8 marks)

Question 6 (16 marks)

- (a) (i) Explain the importance of project organization in engineering management?
(ii) Give your view on the statement that Cash Flow Statement is an important part of a business financial reports.

(9 marks)

- (b) In business application a simple moving averages(SMA) is the unweighted mean of the previous 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 should be the SMA today in terms of yesterday's and the old values?
(iii) State the difference between moving average and weighted moving average?

(7 marks)

The End