

ECTE250 Management Assignment

Cover sheet

2025

Required Information:

Name of Student in ECTE250:

Student Number:

Date:

Mark:

ECTE250 Management Assignment on Network Diagrams

Question 1 (8 marks)

Using the network information in the table below, complete the Network Diagram on the following page. The table contains duration in days which is a function of the 7 digits of your student number.

For Example if your student number is 9973210 then this is in the form $a_6a_5a_4a_3a_2a_1a_0$ and the delays (in units of working days) in the table will be given by the following equations:

$$\text{Delay for Activity A in days} = d_A = a_6 + 1$$

$$\text{Delay for Activity B in days} = d_B = a_5 + 1$$

$$\text{Delay for Activity C in days} = d_C = a_4 + 1$$

$$\text{Delay for Activity D in days} = d_D = a_3 + 1$$

$$\text{Delay for Activity E in days} = d_E = a_2 + 1$$

$$\text{Delay for Activity F in days} = d_F = a_1 + 1$$

$$\text{Delay for Activity G in days} = d_G = a_0 + 1$$

$$\text{Delay for Activity H in days} = d_H = d_G + 1$$

So for the example student number of 9973210, $d_A=10$ days, $d_B=10$ days, $d_C=8$ days, $d_D=4$ days, $d_E=3$ days, $d_F=2$ days, $d_G=1$ day and $d_H=2$ days. In order to complete the provided Network Diagram you must provide the following:

- Add durations to network diagram (1 mark);
- add arrows to show predecessors (1 mark);
- complete a forward pass (earliest times)(2 marks);
- complete a backward pass (latest times)(2marks);
- determine the slack (float)(1 mark);
- indicate the critical path (1 mark).

Activity Name	Duration	Preceding Activity
A	d_A days	None
B	d_B days	A
C	d_C days	A
D	d_D days	B,C
E	d_E days	B,D
F	d_F days	D
G	d_G days	E,F
H	d_H days	F,G

NOTE: Accurate inclusion of all project activities, their dependencies and time estimates is crucial. The submission must be legible.

Node Abbreviations:

ES	Early Start
ID	Activity ID (already entered)
EF	Early Finish
SL	Slack (Float)
Description (already entered)	
LS	Late Start
DUR	Duration (already entered)
LF	Late Finish

Network Diagram to complete:

Early Start(E S)	ID	Early Finish (EF)
Slack for Start (SL)	Activity ID	
Late Start	DURATI ON (DUR)	Late Finish (LF)

	B	
	Activity B	

	E	
	Activity E	

	A	
	Activity A	

	D	
	Activity D	

	H	
	Activity H	

	C	
	Activity C	

	F	
	Activity F	

	G	
	Activity G	

Question 2 (2 marks)

The project booklet has the following details on charging labour costs for your ECTE250 project:

The following costs (in ECTE250 AED) should be used during the financial planning and management of the activity:

Team Member time AED300/hour

If all the activities were performed by units of labour being charged out at the Team Member rate and using the rule that a days worth of work is equivalent to seven (7) hours or 5 days worth of work is equivalent to 35 hours, calculate the cost in ECTE250 AED of the labour on a per activity basis and a total overall cost for this project using the values found in Question 1 for each activity.

Activity	Duration in Days	Total Hours worked for Activity	Labour cost in ECTE250 dollars
A			
B			
C			
D			
E			
F			
G			
H			
Total Cost in ECTE250 dollars for labour			

Question 3 (2 marks)

Using the developed network diagram of Question 1, draw up a Gantt chart for this project, using time units of days (assume 1 day = 7 hours). Show ALL dependencies.