NATIONAL INSTITUTE OF TECHNOLOGY, HAMIRPUR H.P.

Do vijay Kr Barreal

 Programme
 B. Tech.
 Semester
 6th

 Subject...
 CPM and PERT
 Maximum Marks
 50

 Course No.
 CE-306
 Maximum Marks
 50

 Time allowed.
 3 Hours
 Questions spread over 2 pages.

 Unless stated otherwise, the Symbols have their usual meanings in context with the Subject. Assume suitably additional data required if any.

Note:

- Attempt all questions and
- All questions carry equal marks.

Qus.1: Draw the network for the following project and indicate the event times, critical path, activities early/latest start/finish times, and three types of floats. Do not change the order in which activities are listed in the table. (10)

Activity	D	Precedents	EST	EFT	LST	LFT	Total F	Free F	Independent F
A	2	-					1		
В	1	А							
С	4	-				7			
D	3	I,M			×				
Е	1	-							
F	2	В							
G	5	F,L				· · ·			
Ι	2	G,K							
J	1	А							
K	4	J,L							
L	3	C,E				A			-
М	4	G,K							
N	2	Ι					-		
0	1	D.N							

Qus.2: Determine the optimum time and cost of a project for the given set of data, take indirect cost Rs. 10,000/- per month. (10)

Activity	Normal Time	Normal Cost	Crash Time	Crash Cost(Rs)
	(Months)	(Rs)	(Months)	
1-2	2	30000	1	32000
1-3	8	40000	6	46000
1-4	10	50000	5	75000
2-5	5	10000	3	15000
3-5	7	25000	6	26000
4-5	15	70000	10	100000
5-6	6	15000	4	23000
50	ů.			1



Qus.3: (a). Explain the Normal Distribution Curve'.

(b). what do you understand by updating why it is essential, the under what circumstances it is needed? (5, 5)

(5, 5)

3

- Qus.4: (a) What is the work breakdown structure?
 - (b) Differentiate between resource leveling and resource smoothening.
- Qus.5: Contractor intends to bid for a project, data is given below, find the completion time having probability 95 % assuming z factor as 1.65. (10)

