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## Internal Assesment Test - II

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(c) Judge the case and formulate the Equation for the same.

A small maintenance project consists of the following jobs, whose precedence

relationships are given below.

Job	1-2	1-3	2-3	2-5	3-4
Duration (Days)	15	15	3	5	8
Job	3-6	4-5	4-6	5-6	6-7
Duration (Days)	12	1	14	3	14

From the above information, you are required to:

- a) Draw an arrow diagram representing the project.
- b) Find the total float for each activity.
- c) Find the critical path and the total project duration.

## Part B - Compulsory (01\*10=10 marks)

## 4 Case Study

130

Analyze the case given below.

The time estimates (in weeks) for the activities of a PERT network are given

below:

Act	ivity	Weeks)		
Event	Event	Optimistic	Most likely	Pessimistic
1	2	1	1	7
1	3	1	4	7
1	4	2	2	8
2	5	1	1	1
3	5	2	5	14
4	6	2	5	8
5	6	3	6	15

- a) Draw up the project network and identify all the paths thereby.
- b) Determine the expected project length.
- c) Calculate the standard deviation and variance of the project length.
- d) What is the probability that the project will be completed?
  - Atleast 4 weeks earlier that the expected time?
  - ii. Not more than 4 weeks later than the expected time?
- e) If the project due date is 10 weeks, what is the probability of not meeting the due date?
- What is the probability that the project will be completed within the schedule i.e. 20 weeks?
- g) Find the project duration at 90% probability.

	Course Outcomes (COs)	P01	P02	P03	P04	POS	PS01	PS02	PS03	PS04
CO1:	Get an insight into the fundamentals of Operations Research and its definition, characteristics and phases.							***************************************	republic days of the control of the	Total Commence of the Commence
CO2:	Use appropriate quantitative techniques to get feasible and optimal Solutions.		i i justij		gast, a					
CO3:	Understand the usage of game theory, Queuing Theory and Simulation for Solving Business		in the		la, lb,		la, lb,		2b, 2c,	

Page 2 of 3

[10]

CO4

CO4

L4

[10]

L5



**CMR** INSTITUTE OF **TECHNOLOGY** 

Sub:	09ERA-	5100	239	EAR	CH		2 2 2	Code:	MBA 204	1
Date:	718/25	Duration:	90mins	Max Marks:	50	Sem:	$\mathcal{I}$	Branch:	MBA	

Note: Part A - Answer Any Two Full Questions (20\*02=40 Marks)

Part B - Compulsory (01\*10= 10marks)

Part	Quest	tion #	Description	Marks Distribution	1	Max Marks
		a)	Decision el a Grance Choice made by a Plapa that affects The game's outcome.	30	3	
A	1	b)	2m por bonce of Grane Tron:  V Andyring 3doctegic in  tescated decision ording  V Across discipling  V Across discipling  V Rediction ording  V Cooperation 3 constra		7	20 M
		c)	The form of selections of the second of the	2.5m For	10	

		minimax in Deixion From  Minimixe The encourant  Doss or segred in asther  Colore the O1 deconds  Or succidion Sectors  Or the cetors of an	3	
2	b)	706 Seq-sence  1   4   5   2   3   Fm  Total Time = 7:2  9.7. So = m 1 = 25 -  2.7. So = m 2 = 37  2.7. So = m 3 = 15	7	20 M
	c)	3,10,600 NOM 20/02000000000000000000000000000000000	10	

	a)	Secreto offer  Secreto offer  in Jame Hory	3	
	b)	T3 -17		
3		$V = \frac{5}{2}$	7	20 M
		B = 2/4,0,0,4,04	)	,
	·c)	Cotto Cate	10	
		1-2-3-4-6-7 (10h		
•	C = 2 = 2 = 2 = 2 = 2 = 2 = 2 = 2 = 2 =	0/3/0/5/0/10/2/0/10/0		

	a) Dosefron = 17 weeks	
B 4	5 = 3; $62 = 9$ and $50 = 3$ ; $60 = 3$ . $5 = 3$ ; $62 = 9$ and $50 = 3$ . $5 = 3$ ; $62 = 9$ and $50 = 3$ . $5 = 3$ ; $62 = 9$ and $50 = 3$ . $5 = 3$ ; $62 = 9$ and $50 = 3$ . $5 = 3$ ; $62 = 9$ and $50 = 3$ . $5 = 3$ ; $62 = 9$ and $50 = 3$ . $5 = 3$ ; $62 = 9$ and $50 = 3$ .	10 M