2015 Major Summer

Department of Management Studies
Indian Institute of Technology, Delhi
SML-845 Total Project System Management

Time 2 Hours Max Marks: 35

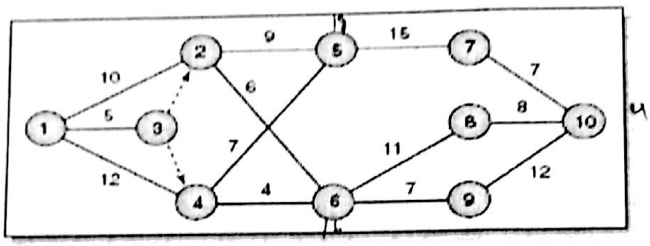
i) Attempt any five Que. 1 compulsory ii) Assume missing data iii) Summarize answers at the end

Que1. Explain in Brief: (10)

(a) Describe how GERT overcomes the limitations of PERT/CPM? Give examples and discuss why? (2)
(b) Discuss Earned Value Analysis (EVA and its significance to monitor project progress performance. (2)
(c) How the "Students Syndrome" and "Parkinson Syndrome" plays a role in managing project duration. (2)
(d) What is "Scope Creep" in project management? Discuss procedure to control "Scope Creep".
(e) What strategies are followed during Installation/ Conversion process of project execution? Describe the project Post-completion Project Review (prepared at the end of the project). (2)

Que 2. a) For the following AOA networks: (5)

a) Draw a corresponding AON network.
b) Compute ES, LS and EF, LF for each activity and find the critical path.
c) Determine the total slack and free slack.

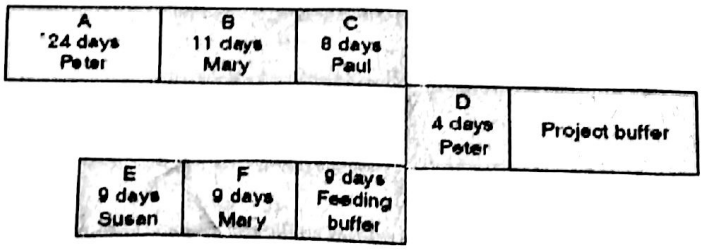


Que 3. My XY Ghosh, chairperson of the Operation Department, has made a list of all the tasks that must be completed by his staff before the end of the academic year. He has studied project management and wants to apply CPM concepts. Using the data shown that gives information T in days, C in $1,000s. (5)

Activity	Immediate Predecessors	Normal		Crash	
		T_n	C_n	T_c	C_c
A	—	6	10	2	38
B	—	4	12	4	12
C	—	4	18	2	36
D	A	6	20	2	40
E	B, D	3	30	2	33
F	C	10	10	6	50
G	F, E	6	20	2	100

(a) Draw the network diagram. Compute the cost slopes. Under normal conditions, what is the earliest the project can be completed? What is the critical path?
(b) What is the earliest the project can be completed? What is the lowest cost for completing it in this time?

Que 4. The diagram below shows that Mary must perform both Activity B and Activity F. (5)
(a) With the realization that Mary has to do the two tasks, indicate two possible critical chains.
(b) Reschedule the work and indicate the position and the size of the feeding buffer.



P.T.O

Que 5. a.) Why is project monitoring essential for the success of a project? List and discuss any 5 factors that affect the frequency of monitoring. Draw a typical EVA-based performance chart and identify, from the chart, any 5 EVA-based metrics in monitoring project progress performance.

b) A project at day 70 exhibits an actual cost of Rs 78,000, a scheduled cost of Rs 84,000, and a value completed of Rs 81,000. Find the schedule and cost indices. **(5)**

Que 6 a) Introduce your term paper project topic. Critically analyze the viability and challenges faced as project manager while implementing the project and how they overcome those challenges. **(5)**

Or

b) Caselet: Yankee Chair Company

The Yankee Chair Company was anxious to get a new model rocking chair onto the market. Past efforts to introduce new models has resulted in frustrating failures. Bret Ricks, president of Yankee Chair, was determined that it would not happen again with the newest model. He had no confidence in his current management team, so he hired Jan Dymore, a local consultant, to organize and manage this project. He assigned a Yankee Chair manager, Tom Gort, to work with Dymore to start developing some talent for project management within the company. Dymore decided to set up a PERT network and guided Gort through the process of listing activities, assigning precedence, and estimating completion times. She also explained the critical path concept to Gort, who by this time had a reasonable grasp of the project direction. At the first review session with Mr. Ricks, the PERT approach was accepted enthusiastically, but toward the end of the review Dymore made some critical remarks about the product design and was subsequently released from the project. Ricks then asked Gort if he could carry on the PERT approach by himself. Gort jumped at the chance, but later in his office he began to question whether or not he really could use the PERT network effectively. Dymore had made a guess at what the critical path would be and how long the project would take, but she had also told Gort that several other calculations had to be made in order to calculate the exact time estimate for each activity and the variance of these activity times. Gort really did not understand the mathematics involved and certainly did not want to look bad in Ricks' eyes, so he decided to take Dymore's guess at the critical path and get the best possible estimates of these activity times. By concentrating his attention on the critical path activities and ignoring the variance issues, he figured he could bring the project in on-time.

I. Will Gort's approach work?

II. How much more of a gamble is Gort taking than any project manager normally takes? What should Gort watch out for? **(5)**
