VPM's
DR VN BRIMS, Thane
Programme: PGDM (2018-20)
PGDM Trimester III Examination March 2019

Subject	**Project Management**		
Roll No.		**Marks**	**60 Marks**
Total No. of Questions	**6**	**Duration**	**3 Hours**
Total No. of printed pages	**4**	**Date**	**25.03.2019**

Note: Q1 is compulsory and Remaining questions are with optional questions into it.

Q1) 20 Marks (Compulsory)

a) Read following case and the questions:

Susanta Badatya was recently assigned as the project manager for a project that his company won as part of competitive bidding in India. Whenever a request for proposal comes to Susanta's company, a committee composed of senior management team consisting of functional managers reviews this request for proposal and turn over to the Proposal department if decision is made to bid by the committee. Proposal is responsible for estimating all work. If the proposal department has no previous history concerning some work packages and is unsure about the cost and time for the work, the proposal team will then ask the functional managers for assistance for estimation of the cost.

Project managers do not often participate in the bidding process. Usually, their first knowledge about the project comes after the contract is awarded to their company, and they are assigned as project manager. Some project managers are highly optimistic and trust their estimates that were submitted in the bids implicitly if the contract award is within short period of time from the date of bidding. Susanta being pessimistic is not sure of the existing process and would like to review the estimates.

A person in proposal department estimated one of the most critical work packages in the project as ten weeks. Susanta had seen this task performed previously in fourteen weeks. He asked the proposal department as to how they had arrived at ten weeks estimate. The estimating group responded that they have used three-point estimate to derive at the average estimated time.

Susanta believed that the three-point estimate was way off the mark. The only way that this work package could ever be completed in optimistic time of four weeks would be for a very small project, nowhere near the complexity of Susanta's project. Therefore, the estimating group was not considering any complexity factor when using the three-point estimate as per PERT. Had the proposal department used proper three-point estimate, the final estimate could have been thirteen weeks. This was what estimate Susanta had thought the work package would take. While the difference looked small, it could have serious impact on Susanta's project and incur penalty for late delivery and loss of face.

Susanta was still confused and decided to talk to the procurement person Dharmista, who was the employee assigned to place order with vendor with thirteen weeks delivery for the work package. Dharmista was considered to be an expert in this work package. Dharmista received the best estimate of sixteen weeks for the work package from a reliable vendor after hard negotiations and conveyed this information to Susanta.

Questions

i. If each estimate is different, how does the project manager decide that one estimate is better than the other? **(5 marks)**
ii. If you were the project manager, which estimate would you use? Why? **(5 Marks)**

b) The following table gives data on normal time, cash time , normal cost & crash cost for a project:

Activity	Normal Time(Weeks)	Normal Cost(Rs.)	Crash Time (Weeks)	Crash Cost(Rs.)
1-2	7	700	4	850
1-3	5	500	3	700
1-4	8	600	5	1200
2-5	9	800	7	1250
3-5	5	700	3	1000
3-6	6	1100	5	1300
4-6	7	1200	5	1450
5-7	2	400	1	500
6-7	3	500	2	850

If the indirect cost per week is Rs. 200, find the optimum duration of the project. **(10 Marks)**

Q2) ***Any two from (a) or (b) or (c) ———— (5x2) = 10 Marks***

a) How interdependencies between events and activities are shown through the construction of project networks? Define events and activities in the context of a network analysis. With the help of an example, explain the critical path in the network.

b) Consider the details of the project which has 10 activities

a. Draw a network diagram of a project
b. Find the critical path and project duration of the critical path.

Activity	Predecessor	Duration(Months)
A	-	6
B	-	10
C	-	11
D	-	9
E	B	5
F	E	8
G	C	2
G	A,F	8
I	E	7
J	D,G	4

c) What tasks should be completed in project monitoring? What is the importance of tracking and monitoring?

Q3) ***Any two from (a) or (b) ———— (5x2) = 10 Marks***

a) The details of a project consisting of nine activities are tabulated below: **(10 Marks)**

Activity	Predecessor	Duration(Days)
A (1-3)	-	3
B (1-2)	-	14
C (1-4)	-	4
D (3-4)	A	10
E (3-6)	A	5
F (2-5)	B	1
G (4-5)	C,D	4
H (4-6)	C,D	6
I (5-6)	F,G	1

i. Draw network diagram
ii. Find the critical path

iii. Determine ES, LF for each Activity
iv. Total Float for each Activity
v. Draw a Gantt chart showing activities, Duration & Project Schedule.

OR

b) You are in charge of organizing a dinner cum dance concert for a reputed hospital. You have reserved a banquet hall that can accommodate 50 doctors with their spouses. The DJ has also to be hired. **(10 Marks)**

a. Develop a scope statement for this project. Assume that the event will occur in five weeks and provide your best guess estimate of the cost and dates for each major activity. Which milestones you feel are most important for this event?
b. Draw a Gannt chart for the activities which needs to be carried out for the event to take place and time taken for each one of them? What would be the priorities likely to be for this project?

Q4) ***Any two from (a) or (b) or (c) ———— (5x2) = 10 Marks***

a) Explain the difference between below mentioned terms with an example
   i. Work Breakdown Structure (WBS)
   ii. Gozinto Chart
   iii. Gantt Chart
b) Take any two projects of your choice & write down the known & unknown risk an associated with it. Also prepare a project charter for each one of them.
c) Explain the Iron Triangle and constraints impact on project.

Q5) ***Any two from (a) or (b) & (c) ———— (5x2) = 10 Marks***

a) A project is characterized by the following time in days:

Activ-ity	Optimistic Time(a)	Most Likely Time(m)	Pessimistic Time (b)
1-2	1	3	5
1-3	3	5	7
2-3	4	6	8
3-4	9	10	11
3-5	1	3	5
4-5	10	12	20
4-6	5	6	13
5-6	5	5.5	9

i. Draw the Network Diagram**.(2 marks)**
ii. Find the critical path**.(2 marks)**
iii. Find the standard deviation of the distribution of the expected project length **(3 marks)**
iv. What is the probability that the project will be completed in 38 days? **(3 marks)**

OR

b) Find out the time required to complete the following project and the critical activities: **(5 marks)**

Activity	Predecessor Activity	Optimistic Time(a)	Most Likely Time(m)	Pessimistic Time (b)
A	-	2	4	6
B	A	3	6	9
C	A	8	10	12
D	B	9	12	15
E	C	8	9	10
F	D,E	16	21	26
G	D,E	19	22	25
H	F	2	5	8
I	G	1	3	5

c) Comment on this statement: “You cannot manage what you cannot measure.” Is this statement true for a project management? Why?

Q6) ***Any two from (a) or (b) or (c) ———— (5x2) = 10 Marks***

a) Explain Project Life Cycle with an example.

b) Explain Project Management Communication w.r.t. its stakeholders with an example.

c) A Project report shows at the end of the 24 weeks in the following EVM data. The project is scheduled to be completed in 52 weeks and budgeted project cost for 52 weeks = ₹ 125 million
Actual Value= ₹ 60 million
Earned Value= ₹40 Million
Planned Value = ₹ 50 million
Determine:

i. Cost & Schedule Variance
ii. Cost performance Index
iii. Estimate at completion of Project
iv. Variance at completion
v. Schedule Performance Index