

**VPM's**  
**DR VN BRIMS, Thane**  
**Programme: MMS (2014-16)**  
**Forth Semester Examination April 2016**

<b>Subject</b>	<b>Project Management</b>		
<b>Roll No.</b>		<b>Marks</b>	<b>60 Marks</b>
<b>Total No. of Questions</b>	<b>7</b>	<b>Duration</b>	<b>3 Hours</b>
<b>Total No. of printed pages</b>		<b>Date</b>	<b>07.04.2016</b>

**Note: Q1 is compulsory and solve any FOUR from the remaining SIX questions.**

**Q1) 20 Marks (Compulsory)**

a) A Project schedule has following characteristics

12 marks

<b>Activity</b>	<b>Time (Weeks)</b>	<b>Activity</b>	<b>Time (weeks)</b>
1-2	4	5-6	4
1-3	1	5-7	8
2-4	1	6-8	1
3-4	1	7-8	2
3-5	6	8-10	5
4-9	5	9-10	7

- i) Construct the network
- ii) Compute E and L for each event and
- iii) Find the critical path
- iv) Total floats of all the activities

**b) Case Study: Calcutta's Metro**

8 marks

In 1996, Calcutta's long-awaited metro finally opened to a collective sigh of relief from the long-suffering population of this large Indian city. Critics had long derided the project a one of the "slowest-moving" public works projects ever conceived and implemented. The single route line, comprising 17 stations and slightly more tan 10 total miles of track, had taken 23 years from the date it was first approved at a final estimated cost of almost \$5 billion. To put this figure into perspective, New York City's subway system boasts 656 miles of main-line track and 468 stations, all for a city whose population is significantly less than Calcutta's estimated 11 million residents. Calcutta's Metro project represents a textbook example of the problems that can arise from poor planning.

The project was initially hampered by poor funding that slowed the development process. However, it was during project planning that a number of constraints became apparent that were to negatively impact on the project. For example, one factor that impeded progress was the decision to begin construction right in the middle of the city. Rather than start at one of the two terminal points, the project managers elected to begin digging in the city center, first tunneling down and then in both directions simultaneously, The problems with soil removal and heavy equipment transportation rose dramatically as a result. Among the other factors that the Metro project had to work around were:

1. Exclusive possession of the site was not possible. Normal life in the city had to go on as usual. While this is a normal by-product of most metropolitan construction, in a city

the size and congestion of Calcutta, with an inadequate road system to begin with, there was a constant battle between maintaining normal traffic flows and creating enough buffers to allow for Metro construction.

2. Traffic could not be fully diverted from the roads. The road system was almost completely inadequate to start. It was, therefore, impossible to divert traffic from already dreadfully overcrowded thoroughfares.

3. Uncharted utilities (sewer, water, gas mains, phone, electric cables). By far of the worst features of construction was the near total absence of a master plan showing the location of underground utilities and cable lines? Work was continually started, stopped, and gradually restarted as crews and await their repairs to the infrastructure.

4. Shops around the site had to be provided with view and approach. Local shop owners were justifiably worried about the effect on their commerce of closing off access to their shops while construction went on. They actively worked against Metro development until they were individually provided with access lanes from their shops to the still-operating streets.

Another unforeseen problem resulted from the large bureaucracy that sprang up around the Metro's construction. Utilizing thousands of laborers, the project organization led to the creation of a huge social umbrella for employees and the families, as housing, schools, and medical centers were created and subsidized by the Metro Authority for the life of the project. In fact, one critic argued that it was wishful thinking to assume that workers would be motivated to quickly complete a project that provided such a comprehensive set of benefits for them and their families.

**Answer the questions :**

- i) How would you construct a Statement of Work for the project to encourage efficient and creative means for undertaking this project?
- ii) Which of the problems the Metro project faced were the result of a poorly conceived project scope and how much was due to simple bad luck? Defend your position.

**Attempt Any FOUR from the Remaining SIX Questions**

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

- a) Explain the UNIDO approach to Social Cost-Benefit Analysis.
- b) Elaborate on the importance of Project Finance
- c) Explain the process of conducting Social Cost Benefit Analysis for Infrastructure Projects

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

- a) Elaborate on the importance of Social Cost Benefit Analysis
- b) Explain the various sources of Finance available to firms for Investment.
- c) What are the conditions that affect the capital structure decisions of a firm

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

- a) Explain the process of Project Procurement Management.
- b) Explain the term "Scouting for project ideas".
- c) A company ABC Ltd. is considering three alternative sites for its new facility. After evaluating the firm's Needs, the Managers have identified the list of Important Selection Criteria into three major Factors as given in following table :

Weights reflecting the relative importance of each factor have been assigned as follows:

Factor	Weight
Availability of skilled labor	0.5
Availability of Raw materials	0.35
Proximity to the firm's markets	0.15
Total	1.0

Factor	Site Scores		
	Site A	Site B	Site C
Availability of skilled labor	50	78	60
Availability of Raw materials	60	55	40
Proximity to the firm's markets	80	70	85

Based on these criteria, the three Alternative sites were scored between 0 and 100 points. With the help of above information find out which site is best for your project by using factor rating method.

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

- What are the different factors are to be considered while selecting a site for the project?
- In projects, why evaluation of risk is very important and how this risk is resolved?
- What are the different types of project organization? Also elaborate on the merits and demerits of project as a part of Functional Organization

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

- Contract Administration in procurement planning
- WBS
- Project Evaluation

**Q7) The indirect cost per day is Rs. 10**

**10 Marks**

- Draw the network for the project
- Find the critical path
- Determine optimum total time and corresponding cost

Activity	Normal		Crash	
	Duration (days)	Cost Rs	Duration (days)	Cost Rs
1-2	6	60	4	100
1-3	4	60	2	200
2-4	5	50	3	150
2-5	3	45	1	65
3-4	6	90	4	200
4-6	8	80	4	300
5-6	4	40	2	100
6-7	3	45	2	80
	<b>Total</b>	<b>470</b>		