



INDIAN INSTITUTE OF MATERIALS MANAGEMENT
Post Graduate Diploma in Materials Management
Paper-18.A Project Management (New)

June 2016

DATE: 18.06.2016

MAX. MARKS: 100

Time: 2.00 p.m. to 5.00 p.m.

Duration : 03 hrs.

INSTRUCTIONS :

1. From Part 'A', answer four questions (Compulsory). Each sub-question carries 01 mark. **Total: Marks 32**
2. From 'B', answer any 3 out of 5 questions. Each question carries 16 marks. **Total Marks: 48**
3. Part 'C', is a case study with sub questions (Compulsory) **Total Marks: 20**
4. Use of calculator and/or mathematical table is permitted. Graph sheet can be used wherever necessary.

PART A (1 mark each Total = 32 marks)

Q. 1) Fill in the blanks

- a) ----- is statical analytical method to monitor the performance of a group of people working on a project.
- b) ----- = Sum of rating (%) of individual workers x 100 / No. Of persons in the group.
- c) The demand for a product generally tends to follow a predictable pattern called the -----
- d) Only drawback of ----- is that the interdependency of various activities cannot be shown fully
- e) The drawing of the arrow diagram is also called -----diagram.
- f) In case of ----- organisation, functional personnel are not directly reporting to the project manager.
- g) ----- may be designed as the logical process which takes into account the quantitative analysis of the various parameters that affect decision making.
- h) ----- states the actual cost, resource and schedule against plan.

Q. 2) Match the following

Column A	Column B
1. LOB	a) Use of risk tool kits or simulation by computer or other aids may uncover risks.
2. EIA	b) Technique to determine various phases of projects
3. Gantt Chart	c) Used to calculate the cumulative expenditure of certain parameters against time.
4. Modeling	d) Process of determining the impact of project on the environmental resources.
5. WBS	e) This is the total budgeted cost for the entire project work.
6. Crashing	f) Breaking of entire project in to sub-projects and sub-projects into sub-sub-project
7. CTW	g) is used for the purpose of product/project scheduling and dispatch
8. S-Curve	h) refers to assigning resources in addition to existing resources to get work done faster, associated with additional cost such as labour, equipments, etc.

Que 3) State True/false of the following

- a) In project cleanup phase, the project is handed over to the customer for production.
- b) Delphi study is carried out with the help of group of experts
- c) Dummy activity is used for logic completion.
- d) Float/Slack means extra time available over and above its duration.
- e) Free float of an activity is that part of the total float which does not affect the subsequent activities.
- f) Matrix organisation is not that much flexible as compared to traditional functional organisation.
- g) Under Laplace criterion, the strategy chosen is the one which maximize the minimum payoffs.
- h) Project documentation is essential for reference for future change in deliverables such as features to be added/deleted

Q. 4) Expand the following

- a) EMAS
- b) APC
- c) PACE
- d) TEFR
- e) GERT
- f) AON
- g) CADD
- h) ACWP

PART B

48 marks

(Answer any three. Each question carries 16 marks)

- Q. 5)** a) What are the various techniques of handling uncertainty in project management?
b) Describe the important phases of project life cycle.
- Q. 6)** a) What is the role of Project consultant in project management?
b) Distinguish between CPM & PERT
- Q.7)** a) Discuss the various techniques for project cost control.
b) What are the various project monitoring and controlling techniques?

Q. 8) Below table shows the information related to a project that involves the merger of two marketing firms (in days).

Activity	Immediate predecessor (s)	Estimated durations (days)
A	-	10
B	-	15
C	A	5
D	B	12
E	C,D	14
F	B	8
G	D,F	15
H	E	10
I	E,G	6
J	F,I	9

Answer the following questions:

- a. Draw the project network.
- b. Develop the project schedule (EST, EFT, LST, LFT).
- c. What are the critical activities?
- d. What is the project completion duration?
- e. If there is an option to delay one activity without delaying the entire merge project, which activity would you delay and why?

Q. 9) Write short note on (any two)

- a) Contents of project documentation
- b) Techniques of project crashing
- c) Environmental impact assessment

PART C

20 marks

Q. 10 compulsory

Activity	Required Predecessor	Normal Time	Normal Cost	Crash Time	Crash Cost
A	(None)	8	\$4000	6	\$6000
B	(None)	5	1500	4	2000
C	(None)	6	2500	4	3000
D	A	4	1800	3	2000
E	A, B	6	1000	5	1200
F	C	7	2000	5	3000
G	A	5	3000	3	6000
H	D, E, F	8	4500	5	9000
I	C	9	6000	4	10000
J	D, E, F	6	6000	4	8000
K	G, H	4	2000	3	2600
L	D, E, F	6	3000	3	9000
M	I, J	4	8000	2	12000

The scheduled completion time is 25 weeks. You must pay a \$1500 penalty for every week you are late. You get a \$1000 bonus for every week you are early.

1. Show your network diagram.
2. Find the normal completion time and the critical path.
3. Determine the schedule that minimizes your total cost for this project, including any penalty or bonus.
 - a. How did you decide when to stop trying shorter and shorter completion times?
 - b. How many weeks total should the project take?
 - c. What will your total cost be?
 - d. Which activities will be shortened from their normal times, and by how much?
 - e. Which activities are critical to the least cost schedule?
