

**SEMESTER END EXAMINATIONS – JUNE 2019****Course & Branch : B.E : Common to all branches****Semester : VIII****Subject : Project Management****Max. Marks : 100****Subject Code : IMOE02****Duration : 3 Hrs****Instructions to the Candidates:**

- Answer one full question from each unit.
- Use of Statistical table is permitted.

**UNIT- I**

1. ✓ a) Define Project Management. On what criteria the projects are categorized? Explain. CO1 (06) //
- ✓ b) List the tools and techniques for project management. CO1 (06) //
- ✓ c) Why estimation of project cost is necessary? Explain the types of cost estimates usually employed in estimating the project cost. CO1 (08) //
2. ✓ a) Illustrate with an example the phases of a project life cycle. Also highlight the importance of life cycle curves in project management. CO1 (12) //
- ✓ b) What methods are used to evaluate the project profitability? Explain them. CO1 (08) //

**UNIT- II**

3. ✓ a) As project manager, what issues will you consider while delegating tasks. CO2 (08) //
- ✓ b) Depict the organizational arrangement of a task force project team. CO2 (07) //
- ✓ c) Define business contract. What sequence of events result in a business contract? CO2 (05) //
4. ✓ a) What is matrix organization structure? Explain with suitable block diagrams. CO2 (08) //
- ✓ b) Discuss the various types of reimbursement methods used to compensate the work done by contractors. CO2 (08) //
- ✓ c) On what parameters contractors are selected? CO2 (04) //

**UNIT- III**

5. ✓ a) Define: i) Critical path ii) Total slack iii) Free slack. CO3 (06) //
- b) The following table gives the activities in a construction project and other relevant information. CO3 (14) //

Activity	Normal time(Day s)	Crash time(Day s)	Normal cost (Rs.)	Crash cost (Rs.)
1-2	20	17	600	720
1-3	25	25	200	200
2-3	10	8	300	440
2-4	12	6	400	700
3-4	5	2	300	420
4-5	10	5	300	600
4-6	5	3	600	900
5-7	10	5	500	800
6-7	8	3	400	700

- i) Draw the activity network of the project.  
ii) Crash the activity step by step until all paths are critical.

# IMOE02

6. **a)** Differentiate between resource smoothing and resource leveling. CO3 (05) 2  
**b)** The three times estimate of a certain activity are given below: CO3 (15) 11

Activity	Optimistic time (Days)	Most likely time (Days)	Pessimistic time (Days)
D-1	2	3	4
1-3	15	16	17
1-2	3	6	9
1-4	6	10	14
2-3	4	8	12
3-4	2	5	7
4-5	2	3	4

- i) Draw network, find the critical path.  
ii) If the scheduled time is 28 days, find the probability of completion of the project work.

## UNIT- IV

7. **a)** With a neat sketch describe briefly the project management environment in India. CO4 (10) 11  
**b)** Analyze the various performance indicators used in project management. CO4 (10) 11

8. **a)** With suitable examples brief breakeven analysis. CO4 (10) 11  
**b)** Write short notes on:  
i) Decisions tree analysis  
ii) Hillier model.

## UNIT- V

9. **a)** Discuss the key factors in determining the debt-equity ratio for a project. CO5 (08) 11  
**b)** Explain with clarity the miscellaneous sources of obtaining finance for a project. CO5 (12) 11
10. **a)** Discuss about the sources of risk and uncertainty involved in venture capital investment. CO5 (08) 11  
**b)** Discuss the salient aspects of the regulation of venture capital industry in India. CO5 (12) 11

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**MAKEUP EXAMINATIONS - FEBRUARY 2019**

**Course & Branch :** B.E. : Common to all branches  
**Subject :** Project Management  
**Subject Code :** IMOE02

**Semester :** VII  
**Max. Marks :** 100  
**Duration :** 3 Hrs

**Instructions to the Candidates:**

- Answer one full question from each unit.

**UNIT- I**

1. Briefly explain the characteristics of a PROJECT. State how projects can be categorised. CO1 (10)  
 What are the factors to be considered in preparing a feasibility report? Explain its importance. CO1 (10)
2. Illustrate different phases of project life cycle with example. CO1 (10)  
 With a neat block diagram explain the steps involved in financial analysis of a project. CO1 (10)

**UNIT- II**

3. How resource allocation can be done in project management? CO2 (05)  
 What is the sequence of events that result in a business contract? CO2 (05)  
 What are the features of the following type of organizations:  
 (i) Project Management as a staff function (ii) Task force organization? CO2 (10)
4. Why delegation is necessary in project execution? Discuss about what, when & how to delegate. CO2 (08)  
 What do you understand by 'Business Contract'? Explain the 3 'R's of contracting. CO2 (12)

**UNIT- III**

5. What are the errors in drawing the network? How can they be avoided? CO3 (04)  
 For the project outlined on the flowing table: i) Draw a network diagram and ii) identify the critical path and duration iii) identify the task(s) you would crash and the incremental cost to reduce project duration to the minimize the cost. The indirect cost is Rs.2000 per week. CO3 (16)

Task	Duration weeks		Cost (Rs.)	
	Normal	Crash	Normal	Crash
1-2	8	4	3000	6000
1-3	5	3	4000	8000
2-4	9	6	4000	5500
3-5	7	5	2000	3200
2-5	5	1	8000	12000
4-6	3	2.5	10000	11200
5-6	6	2	4000	6800
6-7	10	7	6000	8700
5-7	9	5	4200	9000

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6. ~~a)~~ ~~b)~~ Enumerate are the advantages and limitations of Bar Chart? CO3 (04)  
 A project consists of the following activities with their duration in days CO3 (16)  
 and the precedence relationship.

Activity	Precedence	Duration in days
A	-	5
B	-	5
C	A	4
D	B	8
E	C,D	6
F	B	5
G	E,F	7
H	E,F	7
I	E,F	4
J	G	2
K	H	5
L	I	5
M	K,L	4

- i) Draw the network for the above project
- ii) Identify the critical path and duration of the project
- iii) Calculate EST, EFT, LST, LFT, TF,FF and IF for each activity.

## UNIT- IV

7. ~~a)~~ Explain with diagram the project management environment and its CO4 (10)  
 shield.)
- ~~b)~~ Explain the merits and demerits of "Do-It-Yourself" concept. CO4 (10))
8. ~~a)~~ Discuss the steps involved in decision tree analysis. CO4 (10))
- ~~b)~~ How the Hillier Model assessed the risk of a project? Explain with the CO4 (10) cases.)

## UNIT- V

9. ~~a)~~ What are the various steps involved in raising venture capital? CO5 (10)  
 Substantiate.)
- ~~b)~~ Discuss the procedure involved in getting a term loan. CO5 (10))
10. ~~a)~~ Examine with examples the VC investment appraisal process and CO5 (10)  
 management.)
- ~~b)~~ Discuss the current concerns of the Indian venture capital industry. CO5 (10))

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**SEMESTER END EXAMINATIONS – JANUARY 2019**

**Course & Branch :** B.E. : Common to all branches  
**Subject :** Project Management  
**Subject Code :** IMOEO2

**Semester :** VII  
**Max. Marks :** 100  
**Duration :** 3 Hrs

**Instructions to the Candidates:**

- Answer one full question from each unit.

**UNIT- I**

- a) Define a Project .What are the phases in project life cycle? Depict them with life-cycle curves. CO1 (12)  
 b) Explain the steps involved in project management. Also list the tools and techniques that are used to manage a project. CO1 (08)
- a) Compare and contrast the following methods of assessing economic viability of a project: Pay back period & Internal Rate of return. CO1 (08)  
 b) What is the necessity of a feasibility report? What should it include? CO1 (12)  
 Explain Raw material survey and Technical Study.

**UNIT- II**

- a) What are the skills and abilities a project manager should possess? CO2 (10)  
 b) Explain different types of project organisations with a neat sketch. CO2 (10)
- a) Enumerate the authorities of project Managers. CO2 (10)  
 b) Briefly explain the procedure for tendering and selection of contractors. CO2 (10)

**UNIT- III**

- a) Differentiate between PERT and CPM. CO3 (05)  
 b) For the given project activity data, draw network and determine
  - Critical path and duration
  - Total float
  - Free float and
  - Independent float.

Activity	1-2	1-3	2-3	2-4	3-4	4-5
Duration (days)	20	25	10	12	6	10

- a) What steps are involved in PERT analysis? CO3 (10)  
 b) List the advantages and limitations of bar chart. CO3 (05)  
 c) Differentiate between resource smoothing and resource leveling. CO3 (05)

**UNIT- IV**

- a) Analyze with examples the sources, measures and perspectives of risk analysis in practice. CO4 (14)  
 b) Write short note on Hiller model of risk analysis. CO4 (06)
- a) Explain with illustrations the project management environment and its shield. CO4 (08)  
 b) What are the different performance indicators of projects? Explain any three of them with examples. CO4 (12)

## **IMOE02**

### **UNIT- V**

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|-----|----|--|-----|------|
| 9.  | a) | What are the characteristics of project finance?   | CO5 | (10) |
|     | b) | Explain the four phases of venture capital funding process which are essential for company's development | CO5 | (10) |
| 10. | a) | What are the sources of project finance?   | CO5 | (10) |
|     | b) | Explain the types of Venture Capital funding.  | CO5 | (10) |

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## SEMESTER END EXAMINATIONS - JUNE 2019

**Course & Branch :** B.E : Common to all branches  
**Subject :** Project Management  
**Subject Code :** IMOE02

**Semester :** VIII  
**Max. Marks :** 100  
**Duration :** 3 Hrs

### Instructions to the Candidates:

- Answer one full question from each unit.
- Use of Statistical table is permitted.

#### UNIT- I

1. a) Define Project Management. On what criteria the projects are categorized? Explain. CO1 (06)  
 b) List the tools and techniques for project management. CO1 (06)  
 c) Why estimation of project cost is necessary? Explain the types of cost estimates usually employed in estimating the project cost. CO1 (08)
2. a) Illustrate with an example the phases of a project life cycle. Also highlight the importance of life cycle curves in project management. CO1 (12)  
 b) What methods are used to evaluate the project profitability? Explain them. CO1 (08)

#### UNIT- II

3. a) As project manager, what issues will you consider while delegating tasks. CO2 (08)  
 b) Depict the organizational arrangement of a task force project team. CO2 (07)  
 c) Define business contract. What sequence of events result in a business contract? CO2 (05)
4. a) What is matrix organization structure? Explain with suitable block diagrams. CO2 (08)  
 b) Discuss the various types of reimbursement methods used to compensate the work done by contractors. CO2 (08)  
 c) On what parameters contractors are selected? CO2 (04)

#### UNIT- III

5. a) Define: i) Critical path ii) Total slack iii) Free slack. CO3 (06)  
 b) The following table gives the activities in a construction project and other relevant information. CO3 (14)

Activity	Normal time(Day s)	Crash time(Day s)	Normal cost (Rs.)	Crash cost (Rs.)
1-2	20	17	600	720
1-3	25	25	200	200
2-3	10	8	300	440
2-4	12	6	400	700
3-4	5	2	300	420
4-5	10	5	300	600
4-6	5	3	600	900
5-7	10	5	500	800
6-7	8	3	400	700

- i) Draw the activity network of the project.  
 ii) Crash the activity step by step until all paths are critical.

## QUESTION PAPER

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Amritsar Institute, Affiliated  
(05) Jawaharlal Nehru Delhi & Govt.  
(15)

6. a) Differentiate between resource smoothing and resource leveling.  
b) The three times estimate of a certain activity are given below:

CO3  
CO3

Activity	Optimistic time (Days)	Most likely time (Days)	Pessimistic time (Days)
0-1	2	3	4
1-3	15	16	17
1-2	3	6	9
1-4	6	10	14
2-3	4	8	12
3-4	3	5	7
4-5	2	3	4

- i) Draw network, find the critical path.  
ii) If the scheduled time is 28 days, find the probability of completion of the project work.

### UNIT- IV

7. a) With a neat sketch describe briefly the project management environment in India. CO4 (10)  
b) Analyze the various performance indicators used in project management. CO4 (10)

8. a) With suitable examples brief breakeven analysis. CO4 (10)  
b) Write short notes on:  
i) Decisions tree analysis  
ii) Hillier model. CO4 (10)

### UNIT- V

9. a) Discuss the key factors in determining the debt-equity ratio for a project. CO5 (08)  
b) Explain with clarity the miscellaneous sources of obtaining finance for a project. CO5 (12)
10. a) Discuss about the sources of risk and uncertainty involved in venture capital investment. CO5 (08)  
b) Discuss the salient aspects of the regulation of venture capital industry in India. CO5 (12)

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## MAKEUP EXAMINATIONS - FEBRUARY 2020

Program : **B.E : Common to all programs**  
Course Name : **Project Management**  
Subject Code : **IMOE02**

Semester : **VII**  
Max. Marks : **100**  
Duration : **3 Hrs**

### Instructions to the Candidates:

- Answer one full question from each unit.
- Use of Statistical tables are permitted.

### UNIT- I

1. ~~a)~~ With a neat sketch discuss the project life cycle phases. CO1 (10)  
~~b)~~ Discuss the types of cost estimates prepared to execute a project. CO1 (10)
2. ~~a)~~ Explain the categories of projects. CO1 (10)  
~~b)~~ List and explain the methods used to evaluate the project profitability. CO1 (10)

### UNIT- II

3. ~~a)~~ Define delegation. Discuss the important issues relating to delegation. CO2 (06)  
~~b)~~ List the various ways in which a project team can be organized? CO2 (04)  
~~c)~~ Elaborate on 3'R's of contracting giving suitable examples. CO2 (10)
4. ~~a)~~ What is a business contract? Elaborate on the sequence of events resulting in a business contract. CO2 (07)  
~~b)~~ Explain the following types of project organization structures: CO2 (08)  
~~i)~~ Matrix organization  
~~ii)~~ Task force organization.  
~~c)~~ Write a note on effective team building. CO2 (05)

### UNIT- III

5. ~~a)~~ Consider the activities shown in the table below, find the critical path for the project. CO3 (15)

JOB ID	DESCRIPTION	PREDECESSOR	DEPT	TIME
A	FORECASTING UNIT SALES	-	SALES	14
A1	SURVEYING COMPETITIVE PRICING	-	SALES	3
B	PRICING SALES	A, A1	SALES	3
C	PREPARING PRODUCTION SCHEDULES	A	PRODUCTION	7
D	COSTING THE PRODUCTION	C	ACCOUNTING	4
E	PREPARING THE BUDGET	B, D	TREASURER	10

~~a)~~ Differentiate between PERT and CPM networks.

CO3 (05)

# IMOE02

6. ~~a)~~ In the PERT Problem, the following activities are given, find the critical path and all the floats. CO3 (15)

Activity	Precedence	Optimistic Time	Most Likely Time	Pessimistic Time
A		1	4	7
D		1	1	7
C	A	4	5	12
B	A	1	1	7
E	D	1	2.5	7
F	F	1	9.75	14
G	B	2	5	8
H	E,F,G	0	0	6
I	B	2	2.5	19
J	I	2	8	26

CO3 (05)

- b) Write short note on resource leveling.

## UNIT- IV

7. ~~a)~~ Explain with illustrations the project management environment and its shield CO4 (08)  
~~b)~~ Examine the sources and measures of the risks involved in project. CO4 (12)
8. ~~a)~~ Discuss with examples the sensitivity analysis and scenario analysis in risk management. CO4 (08)  
~~b)~~ Discuss the criteria's involved during project selection under risk. CO4 (12)

## UNIT- V

9. ~~a)~~ What is venture capital investment? What makes a venture capital investment different? CO5 (10)  
~~b)~~ Describe briefly a rights issue, a private placement, and a preferential allotment. CO5 (10)
10. ~~a)~~ What is term loan? Discuss the features of term loan. CO5 (10)  
~~b)~~ When should a firm use more equity and when should a firm use more debt? Discuss. CO5 (10)

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## **SEMESTER END EXAMINATIONS – JANUARY 2017**

**Course & Branch : B.E. – Common to all branches**  
**Subject : Project Management**  
**Subject Code : IMOE02**

**Semester : VII**  
**Max. Marks : 100**  
**Duration : 3 Hrs**

### **Instructions to the Candidates:**

- Answer one full question from each unit.
- Use of statistical table allowed.

### **UNIT - I**

1. a) List the main characteristics of a "project". How these features CO1 (10)  
     distinguish projects from other, non-project activity?  
 b) Characterize the sources of raw materials with examples. CO1 (06)  
 c) What are the contents of project feasibility report? CO1 (04)
2. a) How is project profitability evaluated? Explain. CO1 (10)  
 b) Explain with a neat sketch the concept of project life cycle as applied to CO1 (10)  
     a construction project.

### **UNIT - II**

3. a) Identify different characteristics of project manager. CO2 (06)  
 b) Compare and contrast task force organization and matrix organization. CO2 (10)  
 c) List out pre-qualification criteria to select a contractor for inclusion in CO2 (04)  
     short listed tenders?
4. a) Why a project should have a separate project manager? Justify. CO2 (10)  
 b) What are the techniques followed for "Effective time management". CO2 (10)

### **UNIT - III**

5. a) For what purpose a bar chart is used in project management? What are CO3 (05)  
     the advantages and limitations of bar chart?  
 b) Consider the following network for a small maintenance project: CO3 (15)  
     (all times are in days; network proceeds from node 1 to node 7)

Activity	Optimistic time	Pessimistic time	Most Likely time
1-2	1	3	2
1-4	4	6	5
1-3	4	6	5
2-6	2	4	3
2-4	1	3	2
3-4	2	4	3
3-5	7	15	9
4-6	4	6	5
4-7	6	14	10
4-5	1	3	2
5-7	2	4	3
6-7	6	14	10

- i) Draw network diagram representing the project
- ii) What is the critical path and associated time?
- iii) What is the earliest and latest start and finish times?
- iv) What is the expected time for 68% completion limit?



## SEMESTER END EXAMINATIONS – MAY/JUNE 2017

Course & Branch : **B.E. : Common to all branches**  
 Subject : **Project Management**  
 Subject Code : **IMOE02**

Semester : **VIII**  
 Max. Marks : **100**  
 Duration : **3 Hrs**

### Instructions to the Candidates:

- Answer one full question from each unit.
- Use of statistical table permitted.

### UNIT- I

1.  a) With a neat block diagram, explain various categories of projects. CO1 (10)  
 b) Write down the characteristics of a project. CO1 (05)  
 c) Mention the roles and responsibilities of a project leader. CO1 (05)
2.  a) Discuss the salient features of implementation phase of a typical construction project. CO1 (08)  
 b) Briefly describe the steps involved in project management. CO1 (05)  
 c) What is a feasibility report? What should a project feasibility report include? Explain. CO1 (07)

### UNIT- II

3.  a) What is delegation? Explain the main three issues of delegation. CO2 (10)  
 b) What is matrix organization? Explain with block diagram. CO2 (10)
4.  a) Define tendering. Explain the preparation for tender documents. CO2 (10)  
 b) List out pre-qualification criteria to select a contractor for inclusions in short listed tenders. CO2 (05)  
 c) Why is "team building" necessary? Explain. CO2 (05)

### UNIT- III

5.  a) Explain three kinds of time estimates used to determine expected time of an activity? Explain the probability distribution underlying them. CO3 (08)  
 b) A project has the following time schedule: CO3 (12)

Activity	Time in week	Activity	Time in week
1-2	4	5-7	8
1-3	1	6-8	1
2-4	1	7-8	2
3-4	1	8-9	1
3-5	6	8-10	8
4-9	5	9-10	7
5-6	4		

Construct PERT network and compute:

- i) TE and TL for each event
- ii) Float for each activity
- iii) Critical path and its duration.