

(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 2979/2789

Roll No.

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B.Tech.

(SEM. VII) ODD SEMESTER THEORY EXAMINATION 2012-13

PROJECT MANAGEMENT

Time : 3 Hours

Total Marks : 100

Note : (1) Attempt *all* questions.

(2) Allocated marks are mentioned against each part of every question.

1. Attempt any **two** of the following :—

- (A) (i) What do you mean by project ? Explain its peculiarities. (3)
- (ii) Explain the role of project organization in matrix organization. (3)
- (iii) Explain organizing criteria in relation to project management. (4)
- (B) (i) What are the prime objectives ? Are these conflicting ? If yes, then how the trade-off is made ? (3)
- (ii) What are the issues that limit the project organization ? (3)
- (iii) Describe the life cycle of a project in relation to important issues. (4)

(C) (i) Explain the steps of project planning and execution.

(5)

(ii) Explain the selection process of a project. (5)

2. Attempt any **two** of the following :—

(A) (i) How does modified matrix organization differ from matrix organization and pure project organization ? (3)

(ii) Give major guideline for choosing an organizational form for a project. (3)

(iii) What do you mean by Work Breakdown Structure (WBS) ? What are some advantages and disadvantages of housing a project in a functional form ? (4)

(B) (i) Explain the duties of project engineer. (3)

(ii) Describe any process of mitigating the risk associated of a project. (4)

(iii) What are the different types of contracts ? How is the schedule of payment defined ? (3)

(C) (i) What would be the role of project manager in the conflict management ? (3)

(ii) Is it ethical to employ participative management (PM) for motivation in project management. Give reasons. Explain PM. (4)

(iii) How should a city's bus terminal project be organized ? Explain its process of organization. (3)

3. Attempt any **two** of the following :—

(A) A small maintenance project consists of the jobs in the following table :

Job		Normal Duration	Minimum Crash Duration	Cost of crashing
i	j	(days)	(days)	(\$ / day)
1	2	9	6	20
1	3	8	5	25
1	4	15	10	30
2	4	5	3	10
3	4	10	6	15
4	5	2	1	40

- (i) Determine the minimum crashing costs of schedule ranging from normal length down to the minimum length schedule. **(6)**
- (ii) What is the normal project length and the minimum project length ? **(4)**
- (B) Given the following project of XYZ Company. Find the probability of completion by 17 weeks. By what date/time is management 90% sure completion will occur ? **(10)**

Activity	a	m	b	Activity	a	m	b
1-2	5	11	11	3-7	4	7	10
1-3	10	10	10	3-5	2	6	2
1-4	2	5	8	4-5	0	2	6
2-6	1	7	13	5-7	2	8	14
3-6	4	4	10	6-7	1	4	7

- (C) (i) What do you mean by cost benefit analysis ? **(2)**
- (ii) Describe Flukerson rule with an example. **(2)**
- (iii) Explain central limit theorem. **(2)**
- (iv) Differentiate CPM with PERT. **(4)**

4. Attempt any **two** of the following :—

(A) In order to smoothen the use of labour, do resource leveling of the project (day-by-day) with the following detail :

Activity	A	B	C	D	E	F	G	H
Predecessor	XXX	XXX	XXX	XXX	A	B	D, E	G
Time	2	2	4	2	2	3	3	4
Required Labour	6	3	9	4	7	8	2	1

Show your results on Gantt chart for every critical step.

(10)

(B) What are the different environment of a project ? How does it affect the growth of that project and specially economic and market forces ? Discuss the approaches to mitigate the effect of environment.

(10)

(C) (i) What are the three main type of control system ? Explain any one in detail.

(6)

(ii) What is the mathematical expression for critical ratio ? What does it tell to a manager ?

(4)

5. Attempt any **four** of the following :—

(5×4)

(i) Differentiate between internal and external control.

(ii) Explain technical and commercial appraisal.

(iii) Briefly describe the history of PERT and name its contributors.

(iv) What occurs in each stage of audit life cycle ?

(v) Describe the top-down budgeting process.

(vi) Explain Gantt-chart and its role in project management. Supplement your answers with example.