

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE - SEMESTER-V EXAMINATION – WINTER 2015**

**Subject Code: 152505****Date: 14/12/2015****Subject Name: Project Management****Time: 10:30am to 1:00pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

**Q.1** Consider the network for a small maintenance project in the following table. All given times are in days **14**

Job	Initial Node	Final Node	Optimistic time	Most likely time	Pessimistic time
A	1	2	1	3	2
B	1	4	4	6	5
C	1	3	4	5	3
D	2	6	2	4	3
E	2	4	1	3	2
F	3	4	2	4	3
G	3	5	6	15	7
H	4	6	4	6	5
I	4	7	5	15	8
J	4	5	1	3	2
K	5	7	2	4	3
L	6	7	6	15	10

- (a) Draw a PERT diagram representing Project.
- (b) What is the critical path and what is the slack on each activity?
- (c) What is the expected time for 68%, 95% and 99% completion limits?

**Q.2 (a)** How will you classify Projects? Discuss briefly the components and skill profile of the different Projects. **07**

**(b)** How JPP Session is useful to estimate Activity Duration and Resource Requirements? **07**

**OR**

**(b)** List the approaches to building the WBS and discuss any one in detail. **07**

- Q.3** (a) What is Project Management Life Cycle?. **04**  
 (b) The following table gives data on normal and crash time and cost for a project **10**

Activity	Normal		Crash	
	Time(days)	Cost(Rs)	Time(days)	Cost(Rs)
1-2	5	50	4	100
1-3	4	60	2	200
2-4	5	50	4	140
2-5	4	50	1	65
3-4	6	90	4	200
4-6	8	80	3	280
5-6	4	40	2	100
6-7	3	45	3	100

- (a) Draw the network for the Project  
 (b) Find the minimum total time of the project after crash and the corresponding cost. Taking into consideration the minimum crash cost

**OR**

- Q.3** (a) Explain the strategies for effective financial management in execution of the project **04**  
 (b) Consider the network scheduling problem as shown in the following table **10**

Activity	Duration(days)	Manpower Requirement
1-2	6	10
1-3	4	6
1-4	9	8
2-6	5	4
3-6	8	7
4-6	2	5
6-7	7	4

Schedule the activities of the project with a maximum limit on the manpower requirement.

- Q.4** (a) Draw Scope Triangle and discuss Scope Creep in detail. **07**  
 (b) Discuss Functional and Matrix structures for project management in traditional organizational environment. **07**

**OR**

- Q.4** (a) Explain the purposes and contents of the Project Proposals. **07**  
 (b) What are the major components of the project? List them and describe the selection criteria and the responsibilities of an effective Project Manager. **07**

- Q.5** (a) What are the factors affecting Projects? Explain them in detail with suitable example. **07**  
 (b) Discuss the selection criteria for the Core Team Members. **07**

**OR**

- Q.5** (a) Give an overview of Risk Management by giving top reasons for the failure of the project **07**  
 (b) Describe Gantt chart in detail for the project of your choice as tool to build a project schedule. **07**

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