

FACULTY OF ENGINEERING

B.E. 4/4 (Civil) II – Semester (Make-up) Examination, August 2012

Subject: **Construction Management and Administration**

Time: 3 Hours

Max. Marks: 75

Note: Answer all questions from Part – A. Answer any five questions from Part – B.**PART – A (25 Marks)**

1. What are the functions of Construction Management? 2 M
2. Write any three principles of organization. 2 M
3. What are the limitations of bar chart? 2 M
4. Explain time cost analysis in network planning. 2 M
5. Differentiate between direct cost and indirect cost. 2 M
6. Describe three time estimates. 3 M
7. What are the advantages of lumpsum contracts? 3 M
8. List out any three important aspects in tender drafting. 3 M
9. Write any three applications of linear programming. 3 M
10. What is unbounded solution? 3 M

PART – B (5x10 = 50 Marks)

- 11.(a) What are the objectives of construction management and administration?
(b) What is line organization and mention its scope.
- 12.(a) Draw a network and find the critical path and total duration of the project.

Activity	Duration (Days)	Activity	Duration (Days)
1-2	3	4-6	9
2-3	5	4-7	3
2-4	8	5-8	12
3-5	4	6-8	10
3-6	2	7-8	6

- (b) Describe various advantages of large scale production.

13. The following data are available for a building project. The activities, their duration and costs for a particular project are given in the table. The indirect project cost of the project is Rs. 300/day. Determine the optimum cost and duration for the project.

Activity	Normal duration (Days)	Normal cost (Rs.)	Crash duration (Days)	Crash cost (Rs.)
1-2	6	1400	4	1900
1-3	8	2000	5	2800
2-3	4	1100	2	1500
2-4	3	800	2	1400
3-4	0	0	0	0

:: 2 ::

- 14.(a) What are the advantages of Cost plus Contracts?
(b) Mention the salient features of Workmen Compensation Act.
(c) Discuss the safety measures in construction industry.
15. Solve the following problem using simplex method.
Max $Z = 3x_1 + 4x_2 + x_3$.
Subject to constraints
 $x_1 + 2x_2 + 3x_3 \leq 90$
 $2x_1 + x_2 + x_3 \leq 60$
 $3x_1 + x_2 + 2x_3 \leq 80$
 $x_1, x_2, \text{ and } x_3 \geq 0$
- 16.(a) Discuss the role of construction team members in construction industry.
(b) Explain various conditions of contracts?
17. Write short notes on the following:
i) Difference between CPM and PERT
ii) Slack and surplus variables
iii) Updating in network planning.

-:-:-