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B.Sc. DEGREE EXAMINATION, 2011
 (DOUBLE DEGREE)

(OPERATIONS RESEARCH)

(PART – III -- PAPER–III)

730. INTEGER GOAL PROGRAMMING AND NETWORK MODELS
 (December) (Time: 3 Hours)

Maximum: 100 Marks

SECTION –A

(8×5=40)

Answer any EIGHT questions

1. Describe zero one programming.
2. Explain fixed cost problem.
3. Explain the methods of constructing Gomory's constraints for all integer linear programming problem.
4. Describe the formulation of linear Goal programming problem.
5. Explain Geometric programming.
6. Explain in detail preemptive method under Geometric programming.
7. Explain the minimal flow model in networks.
8. Describe how network analysis helps to complete networks.
9. Explain the following terms used in PERT
 (a) Pessimistic (b) Optimistic (c) Most likely
10. Distinguish between PERT and CPM.

SECTION – B

Answer any THREE questions

(3×20=60)

11. Explain the capital Budgeting problem using integer programming technique and state the general form of an IPP.
12. Describe the Simplex method for goal programming problem.
13. Discuss the project cost corresponding to various project durations.
14. "PERT has proven to be an effective management tool that can be utilized by companies of all sizes in almost every industry" Discuss.
15. Given the following information:

Activity	: 0-1	1-2	1-3	2-4	2-5	3-4	3-6	4-7	5-7	6-7
Duration										
in days	: 2	8	10	6	3	3	7	5	2	8

a) Draw the arrow diagram

b) Identify the critical path and find the total project duration.

