S - 951

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Seat No.	

T.E (Civil Engg.) (Semester - VI) (Revised) Examination, Dec. - 2013

ENGINEERING MANAGEMENT (New Course)

Sub. Code :45544

Day and Date : Monday, 23- 12 - 2013 **Total Marks : 100**

Time :10.00 a.m. to 1.00 p.m.

Instructions : 1) **Q. 1 and Q. 6 are compulsory.**
2) **Out of remaining attempt any two questions from each section.**
3) **Figures to the right indicate full marks.**

SECTION - I

Q1) a) What are the functions of management? **[6]**

b) State the different phases of project management. **[4]**

c) A network consists of following activities and their durations of a small project. Draw the network and mark critical path. Also, find total floats and free floats. **[10]**

Activity	1-2	2-3	2-4	3-5	4-5	5-6
Duration in weeks	13	12	15	12	11	12

Q2) a) Determine an initial basic feasible solution to the following transportation problem using Least Cost Method. State the transportation cost. **[6]**

	D_1	D_2	D_3	D_4	**Capacity**
S1	25	23	21	24	**14**
S2	27	28	22	25	**16**
S3	24	23	26	22	**15**
Requirement	**16**	**10**	**15**	**4**	**45**

b) Describe in brief the Process of Decision making. **[9]**

Q3) a) What is network compression? Explain how total project cost varies with change in direct cost and indirect cost. **[6]**

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b) What is resource smoothing? Explain with a suitable example how resource smoothing is to be carried out. [9]

Q4) a) What is Network Updating? [4]

b) Write the steps to solve Linear Programming Problem by Simplex method. [6]

c) Explain beta distribution in PERT. [5]

Q5) Write short notes on any THREE: [15]

a) Principles of Management.

b) Work Breakdown Structure.

c) Precedence Network.

d) Sensitivity Analysis.

SECTION - II

Q6) a) Explain the term Time Value of Money. [3]

b) How long does it take a given amount of money to double itself, if money is invested at nominal rate of interest 9% compounded monthly. [7]

c) Find present worth of the following transaction & decide which transaction is acceptable.

Description	A	B
First cost	5000	7000
Annual O&M	1600	1200
salvag value	500	800
life in years	05	05

Assume rate of interest = 10% per year. [10]

Q7) a) Explain the Pay back method of comparison. [5]

b) What do you know about linear break even analysis. [5]

c) Using Net Present value, state whether following Project is feasible or not. [5]

Year	Cash flow
0	-10,00,000
1	2,00,000
2	2,00,000
3	3,00,000
4	3,00,000
5	5,50,000

Take rate of interest i = 10%.

Q8) a) What are the objectives of material management? [4]

b) Which factors will you consider while deciding the site layout of a typical construction site? [5]

c) Describe in brief the main provisions of minimum wages Act. [6]

Q9) a) What are the various Inventory costs? [5]

b) A construction company uses 50 nos. of precast elements everyday. Each precast element costs Rs. 210 to the company. Inventory carrying cost for the company is Rs.0.5 per unit per day & procurement cost per, order is Rs. 120. Determine optimum order size considering 25 working days per month. [6]

c) Give the applications of Queueing theory in civil engineering. [4]

Q10) Write short notes on any <u>three</u>: [15]

a) ABC analysis.

b) Child labour act.

c) Capitalized cost.

d) Safety stock.

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