

Seat No.	
----------	--

**T.E. (Civil Engineering) (Part - III) (Semester - VI) Examination,
December - 2015**

ENGINEERING MANAGEMENT (Old)

Sub. Code : 45544

Day and Date : Thursday, 03 - 12 - 2015

Total Marks : 100

Time : 02.30 p.m. to 05.30 p.m.

- Instructions :**
- 1) Q1 and Q6 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)** Explain in brief the various principles of management given by Fayol. [8]
- b)** A network consists of following activities and their durations of small project. Draw the network and mark critical path and find all types of Floats. [12]

Activity	1-2	2-3	2-4	3-5	3-6	4-5	5-7	6-7
Durations (Weeks)	5	14	15	12	16	14	13	10

- Q2) a)** Explain limitations of Bar Charts. [4]
- b)** What is Work Breakdown Structure? [4]
- c)** Get IBFS in the following transportation problem by N-W corner method
Also state the cost [7]

	D1	D2	D3	D4	Supply
S1	3	1	7	4	300
S2	2	6	5	9	400
S3	8	3	3	2	500
Demand	250	350	400	200	

P.T.O.

- Q3) a) Explain the process of Decision Making. [5]
- b) Carry out network compression stage by stage for the following project. Determine the least cost and optimum duration. Assume indirect cost as Rs-150 per week. [10]

Activity	Normal Duration (Weeks)	Crash Duration (Weeks)	Normal Cost (Rs.)	Crash Cost (Rs.)
1-2	5	3	500	1300
2-3	6	3	400	850
2-4	8	6	460	700
3-4	5	3	600	1100

- Q4) a) Explain phases in Project Management. [5]
- b) What do you know about precedence network? [5]
- c) Explain how the probability of completing the project within certain duration is determined using PERT networks? [5]

- Q5) Write short notes on any THREE [15]
- Network Updating
 - Types of Organizations
 - Milestones Chart
 - Work Study
 - Sensitivity Analysis

SECTION - II

- Q6) a) What is time value of Money. [4]
- b) Given interest rate of 9% per year what will be accumulated after 15 years if Rs. 2500—invested at end of each year for 15 years. [6]
- c) Explain Break Even Chart with neat diagram. [6]
- d) Explain Objectives of Material Management. [4]

- Q7) a) Explain Pay Back Period Method. [4]
 b) Using EUAV method suggest which machine should be purchased, if the rate of interest is 15%. [11]

	Machine P	Machine Q
Initial Cost (Rs.)	2,60,000/-	3,60,000/-
AOC (Rs.)	8,000/-	3,000/-
Annual Labour Cost (Rs.)	1,10,000	70,000/-
Extra Annual Income Tax (Rs.)	-----	26,000/-
Salvage Value (Rs.)	20,000/-	30,000/-
Life in Years	06	10

- Q8) a) What are factors consider while deciding site layout of any construction site. [5]
 b) Explain the main provisions Child Labour Act. [5]
 c) Explain EOQ with neat sketch. [5]

- Q9) a) Explain General Structure of Queing System. [5]
 b) A construction company requires 1000 bags of cement per month, each costing Rs-320 .The cost per order is Rs-180/- and inventory carrying charges are 25 % of the average inventory. Find out EOQ , Procurement cost and Inventory carrying cost. [10]

Q10) Write short notes on any THREE [15]

- a) ABC Analysis
 b) Benefit Cost Ratio
 c) Workman's Compensation Act
 d) Simple and Compound Interest
 e) Safety Stocks

