Seat
No.

T.E. (Electronics & Telecommunication) (Semester-VI)
Examination, December - 2015
INDUSTRIAL MANAGEMENT & OPERATION RESEARCH
Sub. Code : 45696

Day and Date :Saturday, 05 - 12 - 2015   Total Marks : 100
Time : 02.30 p.m. to 05.30 p.m.

Instructions :   1)   Solve any three questions from each section.
                  2)   Figures to the right indicate full marks.

SECTION-I

Q1) a) What is motivation? Explain Herzberg's Hygiene theory of work motivation.   [8]

b) What are different methods to measure the performance of an individual in an organization.   [8]

Q2) a) Define marketing. Distinguish between marketing concept and selling concept.   [8]

b) Write benefits of inventory control. Explain ABC analysis.   [8]

Q3) a) Explain the various incentives offered by government to promote S.S.I.[8]

b) Mention various elements of cost and explain how will you allocate overheads.   [8]

Q4) Write note on any three.   [18]

   a)   Importance of forecasting.

   b)   Qualities of good leadership.

   c)   Importance of staffing and its procedure.

   d)   Industrial purchasing procedure

   e)   Management of S.S.I.

P.T.O.

SECTION-II

Q5) a) Define operation research. Discuss it's characteristics and limitations.[8]

b) A furniture manufacturing company wishes to make two products chairs and tables from available resources which consists of 400 board feet of mahogany timber and 450 main-hours. It is known that a chair requires 5 board feet and 10 man hours yielding profit of Rs. 45. Each table requires 20 board feet and 15 man-hours and has a profit of Rs. 80. The object of the company is to maximize profit. Solve the problem graphically. [8]

Q6) a) Determine an initial basic feasible solution to the transportation problem using northwest corner method and least cost method. [8]

	To					Available
	3	4	6	8	9	20
From	2	10	1	5	8	30
	7	11	20	40	15	15
	2	1	9	14	16	13
Demand	40	6	8	18	6	

b) Solve using Hungerian Method. A different jobs are to be done on 4 different machines. The matrix below gives the cost (in Rs.) of producing each job I on each one of the machines j. How should the jobs be assigned to the machines so that the total cost is minimum. [8]

Jobs	Machines			
	A	B	C	D
J1	5	7	11	6
J2	8	5	9	6
J3	4	7	10	7
J4	10	4	8	3

Q7) a) Information on the activities required for a project is as follows: [8]

Name	A	B	C	D	E	F	G	H	I	J	K
Node	1-2	1-3	1-4	2-5	3-5	3-6	3-7	4-6	5-7	6-8	7-8
Duration (days)	2	7	8	3	6	10	4	6	2	5	6

Draw the network and calculate the earliest start (ES), earliest finish (EF), latest start (LS) and latest finish (LF) times of each of the activities.

b) Explain PERT with proper diagram. [8]

Q8) Write short notes on any three. [18]

    a) Graphical solution to LPP

    b) Applications of OR

    c) Types of floats

    d) Vogel's approximation method

    e) Time estimates in PERT

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