

Seat No.	
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SV - 458

Total No. of Pages : 3

T.E. (ETC) (Semester - VI) Examination, May - 2018

INDUSTRIAL MANAGEMENT

Sub. Code : 66920

Day and Date : Tuesday, 15 - 05 - 2018

Total Marks : 100

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

- Instructions :**
- 1) All sections are compulsory.
 - 2) Figures to the right indicate full marks.

SECTION - I

(Attempt any three questions)

- Q1)** a) What is planning? Write the importance of planning function. [8]
b) Define motivation. Explain Mc'Gregor's Theory X and Theory Y. [8]
- Q2)** a) Describe the advantages and limitations of advertising. [8]
b) What is inventory control? Explain the ABC analysis. [8]
- Q3)** a) With suitable examples, explain the various elements of costs. [8]
b) Describe the step wise procedure to start a S.S.I. unit. [8]
- Q4)** Write short notes on any three of the following : [3 × 6 = 18]
a) Control techniques
b) Performance appraisal methods
c) Importance of purchasing
d) Social responsibility of modern industry

P.T.O

SECTION - II

(Attempt any three questions)

- Q5) a) Solve following unbalanced assignment problem. There are four machines W, X, Y, Z. three jobs A, B, Care to be assigned to the 3 machines out of total 4 machines. The cost of assignment is given below. Find out the optimal assignment. [8]

	W	X	Y	Z
A	18	24	28	32
B	8	13	17	18
C	10	15	19	22

And Test optimality

- b) Define Operational research. Explain it's methodology and characteristics. [8]

- Q6) a) Consider the details of a project involving activities as shown [8]

Activity	Immediate predecessors	Duration in months
A	--	3
B	--	5
C	--	7
D	B	6
E	A	4
F	A	3
G	B	8
H	C,D	7
I	C,D	3
J	E	4
K	F,G,H	5
L	F,G,H	4
M	I	12
N	J,K	8

- construct the CPM network,
- Determine the critical path and project completion time
- compute total float

- b) What are different methods to obtain initial basic feasible solution to transportation problem? Explain any one method with example. [8]

- Q7) a) Formulate mathematical model of the following LPP, and solve it by graphically. A manufacturer produces two types of toys i.e. A and B. Each toy of type A requires 4 hours of molding and 2 hours of polishing where as each toy of type B requires 3 hours of molding 5 hours of polishing. Molding works for 80 hours in a week and polishing works for 180 hours in a week Profit on a type A is Rs. 3 and on toy of type B is Rs. 4. In what way manufacturer allocates his production capacity for the two types of toys so that he make the maximum profit per week. [8]

Industrial Management & Operational Research

- b) Draw a network corresponding to the following information. Obtain the early and latest start and completion times and determine critical activities. Also find the maximum duration of the project. [8]

Activity : 1-2 1-3 2-6 3-4 3-5 4-6 5-6 5-7 6-7

Duration : 4 6 8 7 4 6 5 19 10

- Q8) Write short notes on (any three)

[18]

- Vogel's approximation method
- Methodology of OR,
- PERT
- Least cost method

