

S.D.E.

M.B.A. (IT) SEM – V (2010 COURSE) (3 YEAR COURSE) :
SUMMER - 2018
SUBJECT: MANAGEMENT SCIENCE AND DECISION TECHNOLOGIES

Day : Wednesday
Date : 06/06/2018

S-2018-4556

Time : 10.00 A.M. TO 1.00 P.M.
Max. Marks: 70

N.B.:

- 1) Attempt Any FOUR questions from Section-I.
- 2) Attempt Any TWO questions from Section-II.
- 3) Figures to the right indicate FULL marks.
- 4) Use of non-programmable CALCULATOR is allowed.
- 5) Answers to both the sections should be written in the SEPARATE answer books.

SECTION-I

- Q.1 What is Linear Programming? Discuss various steps in formulation of Linear Programming Problem. (10)
- Q.2 Discuss contributions and limitations of Scientific Management. (10)
- Q.3 In a bank, Cheques are cashed at a single "teller" counter. Customers arrive at the counter in a Poisson manner at an average rate of 30 customers per hour. The teller takes on an average a minute and a half to cash the cheque. The service time has been shown to be exponentially distributed. (10)
- i) Calculate the percentage of time the teller is busy.
 - ii) Calculate the average time a customer is expected to wait.
- Q.4 What do you mean by 'Operations Research'? Discuss methodology of Operations Research. (10)
- Q.5 Write short notes on Any TWO of the following : (10)
- a) PERT
 - b) Decision and Risk analysis
 - c) Transportation problem

SECTION-II

- Q.6 Discuss Monte-Carlo Technique of simulation, bringing out its advantages and limitations. (15)

P.T.O.

- Q.7** A Sales Manager has to assign salesmen to four territories. He has four candidates (15) of varying experience and capabilities and assesses the possible profit for each salesman in each territory as given below.
Find the assignment which maximises profit.

Salesmen	Territories			
	A	B	C	D
1	35	27	28	37
2	28	34	29	40
3	35	24	32	33
4	24	32	25	82

- Q.8** Using the following information plot a network. Determine the critical path and (15) compute slack for all events:

Activity	Activity duration (in weeks)	Activity	Activity duration (in weeks)
0-1	5	3-5	7
0-2	10	3-6	11
1-2	4	4-6	8
1-3	8	4-7	9
1-4	3	5-7	9
2-3	6	5-6	4
2-5	8	6-7	1

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