

E.M.G.YADAVA WOMEN'S COLLEGE, MADURAI-14.

(An Autonomous Institution Affiliated to Madurai Kamaraj University)
Re-accredited (3rd Cycle) with Grade A⁺ and CGPA 3. 51 by NAAC

CBCS

DEPARTMENT OF MATHEMATICS-UG

(w.e.f. 2017- 2018 Batch onwards)

Title of the paper : Diploma Course in Operations Research

Sub Code : 17MD1

Non Semester

Contact : 2hours

Objectives :

1. To study the Simplex and Dual simplex method.
2. To study the applications of Sequencing problem and Inventory control

Unit I

The computational procedure - Uses of Artificial Variable

Unit II

Sequencing problem: Problems of sequencing – Processing n Jobs through two machines – Processing n Jobs through k machines – Processing 2 Jobs through k machines.

Unit III

Inventory control - I – factors affecting inventory control-An inventory control problem –The concept of EOQ –Deterministic Inventory Problems with no Shortages

Unit IV

Inventory control – I –Deterministic Inventory Problem with Shortages-Problems of EOQ with price Breaks

Unit V

Multi – Item deterministic Problems –Dynamic Order Quantity

Unit – I : Chapter 4: 4.3 & 4.4

Unit – II : Chapter 12:12.2 & 12.3 to 12.6

Unit – III : Chapter 19: 19.7 to 19.10

Unit – IV : Chapter 19: 19. 11 & 19.12

Unit – V : Chapter 19: 19.13 & 19.14

Text book: -

Kanti Swarup,P.K.Gupta,Man Mohan, *Operations Research*
Sultan Chand & Sons,Educational Publishers,New Delhi,2016

Reference Books:-

1. Arumugam S.and Thangapandi Isaac A., *Topics in Operations Research:Linear Programming*,June 2012.NewGamma Publishing House, Palayamkottai , 2012.
2. Gupta P.K., ManMohan, *Problems in Operations Research*, Sultan Chand & Sons, Delhi, 2003
3. Sharma J.K.,4th Edition. *Operations Research Theory and Applications*, Macmillan Publishers India Ltd., 2010

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Title of the paper : Practical II - Diploma Course in Operations Research

Sub Code : 17MDP

Non Semester

Contact : 1 hours

Objective:

To provide the practical, Knowledge of Operations Research by solving several problems

Problems

1. Simplex Method of solving a LPP-Problem1.
2. Simplex Method of solving a LPP-Problem2.
3. Charne's Method of penalty(Big M Method)
4. Economic Order Quantity
5. Problem of EOQ with Finite Replenishment.
6. Deterministic Inventory problem with Shortages
7. Problems of EOQ with Price Breaks
8. Problem of EOQ with Warehouse Capacity
9. Sequencing Problem 1:Processing n Jobs through two machines.
10. Sequencing Problem 1:Processing n Jobs through k machines.
11. Sequencing Problem 1:Processing 2 Jobs through k machines.
12. Inventory Problems