OMEGA PG COLLEGE –MBA (CC:2144)

APPROVED BY AICTE, AFFILIATED TO OSMANIA UNIVERSITY,HYDERABAD

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MCA II SEM IMPORTANT QUESTIONS

Paper Code – PCC206

Course: OPERATIONS RESEARCH (O.R)

UNIT: I(LINEAR PROGRAMMING)

(ONE Compulsory Practical Problem onLPP (OR)Graphical Method (Maximization,Minimization,Mixed, Un-Rounded & Infinate)

- Explain the Concept of OR and its Origin, Nature, Limitation andApplication.
- Explain the concept of Linear Programming Problem (LPP) and itsApplications.
- Define Sensitivity analysis. Discuss its role or implications in LPP. Explain the changes in the right hand side of the constraint in sensitivity analysis.

UNIT: II(Transportation Problem)

(One or Two Complulsory Practical Problems on Transportation Problem (NWCR,LCM, VAM, & MODI)

- What is Transportation Problem? How do you mathematically formulate the TP? State the various steps involved in an algorithm of TP.
- How to obtain IBFS by

(i) North West Corner Method (NWCR)

(ii) Matrix Minimum Method (MMM), Least Cost method (LCM)

(iii) Vogel's approximation Method (VAM)

- Explain in details Hungarian Method of obtaining Optimal solution in AP

UNIT: III(Assignment Problem)

(One or Two Complulsory Practical Problems onA.P(Maximisation,Minimisation AND Travelling Salesmen Problem)

- Explain in details Hungarian Method of obtaining Optimal solution in AP
- Explain the terms:
  Integer Programming Formulation
  Cutting plane Algorithm
  Branch –and – Bound Technique
  Zero – one Implicit Enumeration Algorithm

UNIT: IV(Dynamic Programming)

(One or Two Complulsory Practical Problems on dynamic programming method

Explain the application of Mathematical problem and solution Linear programming problem

UNIT: V (One or Two Complulsory Practical Problems on Game Theory, { Saddle Point, Dominance Graphical Method}

SHORT QUESTIONS

1. Define OR and its managerial applications2. Goal and Dynamic programming3. Integer programming problem4. Define LPP 5.Sensitivity Analysis 6. Relationship B/W Primal –Dual 7.Degeneracy 8.Simple method 9. Define IBFS 10.. Balanced and Un-Balanced T.P and A.P11. Difference between T.P & A.P 12. What are TSP and its applications?13 Fare Game14. Saddle point 25. Dominance and graphical method 21.