1 Course Details	
Course Name	RESOURCE MANAGEMENT TECHNIQUES
Course Code	UCA15406/UCS15406
Course Credit	4
Semester	4
Class to which the course is offered	BCA/BSC(CS)
Faculty offering the course	M.RAMACHANDRAN
Department which the faculty belongs to	Mathematics
Faculty Contact	9444637100
Faculty Office	FSH

2 Course Objective

To apply Operations research methods for decision making process.
To apply Opeartions research techniques for solving real life problems.

3 Lesson Plan

Week No.	Period No.	Portions to be Covered	Teaching Methods (BB, PPT, etc)	Text (or) Reference Books (Mention T1 or R1, etc)
		UNIT - I		
1	1	Syllabus given	BB	T1, R1
	2	Introduction	BB	T1, R1
	3	Basics of Operations Research (OR)	BB	T1, R1
	4	Characteristics of O.R	BB	T1, R1
	5	Importance of O.R in Industry	BB	T1, R1
2	6	O.R and Decision making	BB	T1, R1
		UNIT - II		
	7	Role of computers in O.R.	BB	T1, R1
	8	Linear programming	BB	T1, R1
	9	Formulations and Graphical solution	BB	T1, R1
	10	Canonical of Linear Programming problem.	BB	T1, R1
3	11	Standard form of LPP	BB	T1, R1
	12	Algebraic solution	BB	T1, R1
	13	Simplex Method	BB	T1, R1
		UNIT - III		
	14	Transportation model	BB	T1, R1
	15	Definition – formulation	BB	T1, R1

4	16	Solution of transportation models	BB	T1, R1
	17	Initial Basic feasible solution	BB	T1, R1
	18	North west corner method	BB	T1, R1
	19	Row – minima method	BB	T1, R1
	20	Revision	BB	T1, R1
5	21	Revision	BB	T1, R1
	22	column – minima	BB	T1, R1
	23	matrix minima	BB	T1, R1
	24	Vogel's approximation method	BB	T1, R1
	25	North west corner method(Unbalanced)	BB	T1, R1
6	26	Row – minima method(Unbalanced)	BB	T1, R1
	27	Revision	BB	T1, R1
	28	Revision	BB	T1, R1
	29	column – minima(Unbalanced)	BB	T1, R1
	30	matrix minima (Unbalanced)	BB	T1, R1
7	31	Vogel's approximation method (Unbalanced)	BB	T1, R1
	32	Revision	BB	T1, R1
	33	Revision	BB	T1, R1
	34	Assignment problem (Balanced problem)	BB	T1, R1
	35	Revision	BB	T1, R1
8	36	Assignment problem (Unbalanced problem)	BB	T1, R1
	37	Revision	BB	T1, R1
	38	Revision	BB	T1, R1
	39	Cycle test - I	BB	T1, R1
	40	Cycle test - I	BB	T1, R1
9	41	Cycle test - I	BB	T1, R1
		UNIT - IV		
	42	Sequencing problem	BB	T1, R1
	43	Processing n jobs through 2 machines	BB	T1, R1
	44	Processing n jobs through 2 machines	BB	T1, R1
	45	Revision	BB	T1, R1
10	46	Revision	BB	T1, R1
	47	Processing n jobs through 3 machines	BB	T1, R1
	48	Processing n jobs through 3 machines	BB	T1, R1
	49	Revision	BB	T1, R1
	50	Processing n jobs through m machines	BB	T1, R1
11	51	Processing n jobs through m machines	BB	T1, R2
	52	Revision	BB	T1, R3
	53	Processing 2 jobs through m machines	BB	T1, R1

	54	Processing 2 jobs through m machines	BB	T1, R1
	55	Revision	BB	T1, R1
12	56	Cycle test - II	BB	T1, R1
	57	Cycle test - II	BB	T1, R1
	58	Cycle test - II	BB	T1, R1
		UNIT - V		
	59	Theory of Games	BB	T1, R1
	60	Introduction	BB	T1, R1
13	61	Basic definitions given	BB	T1, R1
	62	Characteristics of Game theory	BB	T1, R1
	63	Pure Strategies	BB	T1, R1
	64	Saddle Point	BB	T1, R1
	65	Value of the game	BB	T1, R1
14	66	Mixed Strategies	BB	T1, R1
	67	Two Persons Zero Sum Game	BB	T1, R1
	68	Graphical Solutions of 2 x M	BB	T2, R1
	69	Graphical Solutions of N x 2 game	BB	T2, R1
	70	Model Examination		
15	71	Model Examination		
	72	Model Examination		
	73	Model Examination		
	74	Model Examination		
	75	Model Examination		

4 Outcomes

a. Understand the theory of optimization methods for solving various types of optimization problems

b. An ability to apply the mathematical results and numerical techniques of optimization theory to concrete financial related problems.

5 Text Book

Resource Management Techniques by Dr.K.Ganesan,Prof. Ganapathy Subramanian, Dr. Sundaresan

6 Reference Books

1.Vittal, . P.R. (2003),Operations Research,Margham Publications, Chennai.

2..Kanti Swarup, Gupta, P.K. and Manmohan(2006),Operations Research,12th Edition-Sultan Chand & Sons, New Delhi.