AMBALA COLLEGE OF ENGINEERING AND APPLIED RESERACH
DEPTT. OF COMPUTER SCIENCE & ENGINEERING
LECTURE PLAN- (CSE-402N)

Name of Faculty: Er. Seema Rani
Discipline: B.Tech(Computer Science & Engineering)
Semester: 8th
Subject: Neural Networks & Fuzzy Logic
Lesson Plan Duration: 15 Weeks(Feb-May, 2021)
Work Load Per Week: L:T:P- 4:0:0

	Theory	
Week	**Lecture No.**	**Topic (including assignment & Test)**
1ST	1	Concepts of Neural Networks,Characteristics of Neural Networks
	2	Historical Perspective of Neural Networks
	3	Applications of Neural Networks
	4	The Biological Prototype, Neuron Concept
2ND	5	Single Layer and Multilayer Neural Networks
	6	Terminology, Notation and representation of NN,
	7	Training of Artificial Neural Networks
	8	Representation of perceptron and issues
3RD	9	Perceptron learning and training
	10	Classification of Perceptron, Linear Separability
	11	Classification of Perceptron, Linear Separability
	12	Hopfield Net's Structure and training
4TH	13	Applications of Hopfield Net and its stability
	14	Concept of Back propagation
	15	Back propagation Training Algorithm
	16	Applications of Back propagation
5TH	17	Counter propagation Networks
	18	Kohonan Network, Grossberg Layer Training
	19	Applications of CPN, Image classification
	20	Structure of BAM
6TH	21	Encoding and retrieving a associations
	22	Memory Capacity of BAM
	23	Doubt clearing Session
	24	Doubt clearing Session

7TH	25	Doubt clearing Session
	26	Sessional-I
	27	Sessional-I
	28	Sessional-I
8TH	29	ART Architecture
	30	ART classification operation
	31	ART implementation
	32	Characterstics of ART
9TH	33	Image compression using ART
	34	Optical Neural Networks,Vector Matrix Multiplier
	35	Hopfield Net using Electro optical matrix multiplier
	36	Optical Hopfield Net using Volume Holograms
10TH	37	Structure and training of Cognitron
	38	Structure and training of Neocognitron
	39	Elements of genetic algorithm
	40	Crossover
11TH	41	Types of Crossover
	42	Sessional-II
	43	Sessional-II
	44	Sessional-II
12TH	45	Numerical Problems of GA
	46	Working of genetic algorithm evolving neural networks
	47	Introduction to Fuzzy Logic
	48	Classical and Fuzzy Sets: Overview of Classical Sets
13TH	49	Membership Function
	50	Fuzzy rule generation
	51	Operations on Fuzzy Sets: Compliment, Intersections,Unions,
	52	Combinations of Operations,Aggregation Operations
14TH	53	Fuzzy Arithmetic
	54	Fuzzy Arithmetic
	55	Fuzzy Arithmetic
	56	Doubt clearing Session
15TH	57	Doubt clearing Session
	58	Sessional-III
	59	Sessional-III
	60	Sessional-III