



LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING
(AUTONOMOUS)

L.B. Reddy Nagar :: Mylavaram-521 230 :: Krishna Dist. :: A.P.
Approved by AICTE, New Delhi. Affiliated to JNTUK, Kakinada
EXAMINATION SECTION

R14

M.Tech.(II Semester) (R14) Supplementary Examinations, November 2020
(R14 : Applicable for 2016 regular admitted batch only)

TIME TABLE

TIME : 10.00 AM To 01.00 PM

DATE	Computer Science and Engineering	Software Engineering	Systems and Signal Processing	VLSI and Embedded Systems	Thermal Engineering	Power Electronics and Drives
09-11-2020 (Monday)	MTC201 - Big Data	MTIT201 - Software Metrics	MTEC201 - Adaptive Signal Processing	MTVL201 - Low Power VLSI Design	MTME201 - Measurements in Thermal Engineering	MTEE201 - Switched Mode Power Conversion
10-11-2020 (Tuesday)	MTC202 - Computer Vision	MTIT202 - Requirements Engineering and Estimation	MTEC202 - Advanced Soft Computing Techniques	MTVL202 - Design of Analog and Mixed Mode VLSI Circuits	MTME202 - Refrigeration and Cryogenics	MTEE202 - Control of Motor Drives-II
11-11-2020 (Wednesday)	MTC203 - Soft Computing	MTIT203 - Software Project Management	MTEC203 - Random Processes	MTVL203 - Cryptography and Network Security	MTME203 - Computational Fluid Dynamics	MTEE203 - DSP Processors and FPGA
12-11-2020 (Thursday)	MTC204 - Advanced Operating Systems	MTIT204 - Software Testing & Quality Assurance	MTEC204 - Transform Techniques	MTVL204 - Advanced Embedded Systems	MTME204 - Design of Thermal Systems	MTEE204 - Modern Control Theory
13-11-2020 (Friday)	Elective - III MTC2052 - Network Security	Elective - III MTIT2051 - Web Searching and Mining	Elective - III MTEC2051 - Detection and Estimation Theory	Elective - III MTVL2053 - Digital Signal Processors and Architectures	Elective - III MTME2051 - Energy Conservation and Management	Elective - III MTEE2051 - Power Quality
16-11-2020 (Monday)	Elective - IV MTC2063 - E-Commerce MTC2061 - Cloud Computing	Elective - IV MTIT2062 - Neural Networks MTIT2063 - Human Computer Interfacing	Elective - IV MTEC2061 - Coding Theory and Techniques	Elective - IV MTVL2063 - VLSI Testing and Verification	Elective - IV MTME2063 - Optimization Methods in Engineering	Elective - IV MTEE2063 - Artificial Intelligent Techniques MTEE2061 - HVDC and FACTS

NOTE: (i) Any omissions or clashes in this time table may please be informed to the Controller of Examinations immediately.
(ii) Even if government/JNTUK/College declares holiday on any of the above dates, the examinations shall be conducted as notified only.
(iii) For any clarification in respect of the above examinations, please contact the Controller of Examinations.

Date : 21-10-2020

Copy to: 1. M.Tech. HoDs for N.A., 2. M.Tech. Notice Boards

CONTROLLER OF EXAMINATIONS

PRINCIPAL

LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING
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M.Tech. (II Semester) ~~Regular~~ / Supplementary Examinations

MTEE2063-ARTIFICIAL INTELLIGENT TECHNIQUES

(PED)

Time : 3 hours

Max. Marks : 60

Answer all the questions
All questions carry equal marks

- 1(a) Using ADALINE model train the following ANN with 2 input neurons, 2 hidden neurons and 1 output neuron and use linear Activation function (with threshold 0.5) for the data

$$X = \begin{bmatrix} 1 \\ 1 \end{bmatrix}, d = 0.5, \eta = 0.3, V = \begin{bmatrix} 0 & 1 \\ 0.5 & 1 \end{bmatrix}, W = \begin{bmatrix} 0.5 \\ 0.5 \end{bmatrix}$$

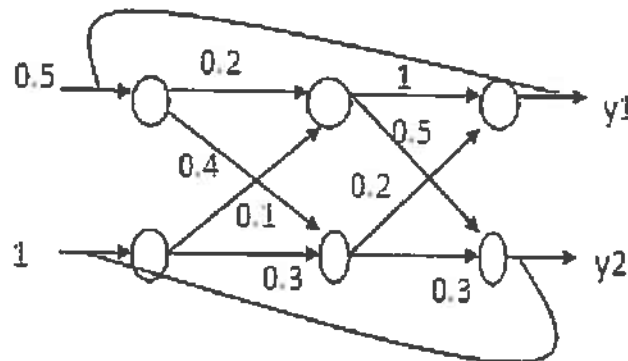
[6M]

- (b) Illustrate Mc-Culloch Pitts model.

[6M]

(OR)

- (c) Train the following ANN by using recurrent networks algorithm. Use sigmoidal function as activation function.

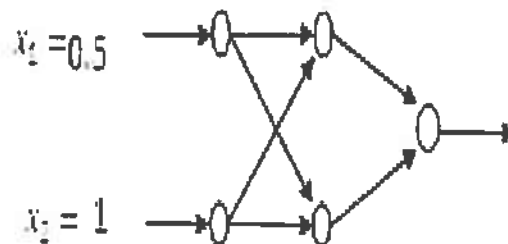


[6M]

- (d) What is activation function? Discuss the classification of the activation Function.

[6M]

- 2 (a) Apply Back Propagation algorithm for multi layer feed forward networks for testing sets . $U = \begin{bmatrix} -0.5 & -0.6 \\ -0.8 & -0.2 \end{bmatrix}, V = \begin{bmatrix} 0.4 \\ 0.6 \end{bmatrix}, \eta = 0.2, D = 0.6.$



[12M]

(OR)

1 of 2

MTEE2063-ARTIFICIAL INTELLIGENT TECHNIQUES

- (b) Illustrate Generalized Delta Rule training algorithm. [6M]
(c) Using MADALINE model train the following ANN with 2 input neurons, 2 hidden neurons with biases b_1 and b_2 and 1 output neuron with bias b_3 and use binary Activation function (with threshold 0.5) for the data
$$X = \begin{bmatrix} 1 \\ 1 \end{bmatrix}, d = 1, \eta = 0.2, V = \begin{bmatrix} 1 & 2 \\ 0.5 & 1 \end{bmatrix}, W = \begin{bmatrix} 0.6 \\ 0.8 \end{bmatrix}, b_1 = b_2 = b_3 = 0.5$$
 [6M]
- 3(a) Discuss how discussion making and rules are framed in fuzzy logic with an example. [6M]
(b) Describe the comment on the properties and operations of fuzzy relations. [6M]
- (OR)**
- (c) Consider two universes of discourses described by $X = \{1, 2, 3, 4\}$ and $Y = \{1, 2, 3, 4, 5, 6\}$. Let two fuzzy set A and B be given by
 $A = \{(2, 0.8), (3, 1), (4, 0.3)\}$ $B = \{(2, 0.4), (3, 1), (4, 0.6), (5, 0.2)\}$
Find the fuzzy relation R corresponding to IF A' Then B'. [6M]
(d) Describe the process of fuzzification with an example. [6M]
- 4(a) Discuss fuzzy rule based system with an example. [6M]
(b) Given that $A = \{(3, 0.5), (4, 0.6), (5, 0.9)\}$ and $B = \{(3, 0.8), (5, 0.2)\}$
Determine the Cartesian product of two sets $A \times B$. [6M]
- (OR)**
- (c) Define the fuzzy membership Function along with an example. [6M]
(d) Describe various applications of fuzzy logic system. [6M]
- 5(a) Write the algorithmic steps for genetic system. [6M]
(b) Describe the concept of mutation in genetic algorithm. [6M]
- (OR)**
- (c) Describe the concept of selection in genetic algorithm. [6M]
(d) Discuss cross over related to genetic algorithm in detail. [6M]
