

**END SEMESTER THEORY EXAM; NOV./DEC.-2018**

<b>Program:</b>	<b>M. Tech (ECE)</b>	<b>Year/Semester:</b>	<b>3<sup>rd</sup> Sem.</b>
<b>Course/Subject:</b>	<b>Neural Network &amp; Fuzzy Logic</b>	<b>Duration:</b>	<b>03:00 Hrs.</b>
<b>Course/Subject Code:</b>	<b>13130301</b>	<b>Maximum Marks:</b>	<b>100</b>
<b>Roll No.:</b>			

**Instructions:-**

1. Write your Roll No. on the Question paper.
2. Candidate should ensure that they have been provided correct question paper. Complaint(s) in this regard, if any, should be made within 15 minutes of the commencement of the exam. No complaint(s) will be entertained thereafter.
3. Attempt five questions in all. Q.No. 1 is compulsory. Attempt other four questions, by selecting one question from each unit. All questions carry equal marks Parts of a question should be attempted in sequential order. Marks are indicated against each question.
4. Illustrate your answer with diagram wherever required.

Q.1 Explain the following: (20)

- a) Explain Neural Network Terminology
- b) What is Clustering algorithm
- c) What are associative memories
- d) What is Fuzzy Inference Algorithm

**UNIT-I**

Q.2 Explain the history of development in neural network principles (20)

Q.3 Explain (20)

- (a) Model of a neuron
- (b) Fuzzy System Design

**UNIT-II**

Q.4. Explain basic Hop field model (20)

Q.5. Explain Kohonen's Map (20)

**UNIT-III**

Q. 6 Explain basic Radial functions of neural network (20)

Q. 7 Write note on applications of neural nets (20)

**UNIT-IV**

Q. 8 Explain (20)

- (a) Linguistic variables
- (b) Fuzzy Vs Crisp set

Q. 9 Explain (20)

- (a) Fuzzy IF-Then rules
- (b) Variable Interference Techniques

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<b>Program:</b>	M. Tech (ECE)	<b>Year/Semester:</b>	3 <sup>rd</sup> Sem.
<b>Course/Subject:</b>	CDMA Systems	<b>Duration:</b>	03:00 Hrs.
<b>Course/Subject Code:</b>	13130302	<b>Maximum Marks:</b>	100
<b>Roll No.:</b>			

**Instructions:-**

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3. Attempt five questions in all. Q.1 is compulsory. Attempt other five questions selecting one question from each unit. Parts of a question should be attempted in sequential order. Marks are indicated against each question.
4. Illustrate your answer with diagram wherever required.

- Q.1 Attempt all questions (4x5=20)
- a) What is frequency hopped spread spectrum?
  - b) What is CDMA Systems?
  - c) What is Soft Handoffs?
  - d) What is Error probability for DS-CDMA?

### UNIT-I

- Q.2 What are the various Spreading /coding tradeoffs, describe them? (20)

**OR**

- Q.3 Write short note on (2x10=20)
- I. Shift register sequences
  - II. Non- Linear sequences

### UNIT-II

- Q.4 What is fading. What are the different types of fading in CDMA? Explain in details. (20)

**OR**

- Q.5 Write short notes on followings: (2x10= 20)
- a) Performance analysis of cellular CDMA
  - b) Multi-user detection

### UNIT-III

- Q.6 Why power control is essential in CDMA systems? Explain reverse link closed loop power control with suitable diagram. (20)

**OR**

- Q.7 What are different types of Hand-off in CDMA System? Give benefits of soft hand-off. (20)

### UNIT-IV

- Q.8 Explain the third generation CDMA systems in details. (20)

**OR**

- Q.9 Write short notes on followings: (2x10= 20)
- (a) Multi Carrier CDMA
  - (b) IS-95

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Program:	M. Tech (ECE)	Year/Semester:	3 <sup>rd</sup> Sem.
Course/Subject:	Computer Communications	Duration:	03:00 Hrs.
Course/Subject Code:	13130304	Maximum Marks:	100
Roll No.:			

**Instructions:-**

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3. Attempt five questions in all. Q.1 is compulsory. Attempt other four questions selecting one question from each unit. Parts of a question should be attempted in sequential order. Marks are indicated against each question.
4. Illustrate your answer with diagram wherever required.

- Q.1 Explain the following: (4X5=20)
- a) Explain CDMA
  - b) What is IEEE standard for LANs
  - c) What do you understand by Cryptography
  - d) Explain Network Layout

### UNIT-I

- Q.2 Write a note on any two reference models (20)
- Q.3 Write note on (20)
- (a) FDM
  - (b) Bandwidth Transmission Media
  - (c) ISDN
  - (d) Circuit & Packet switching

### UNIT-II

- Q.4. Discuss data link design issues in detail (20)
- Q.5. Discuss IP addressing schemes (20)

### UNIT-III

- Q. 6 Explain file transfer & access management (20)
- Q. 7 Write note on (20)
- (a) Key distribution problem (b) Public cryptography (c) Authentication and Digital signatures

### UNIT-IV

- Q. 8 Explain Bernoulli Trials-Markov chains (20)
- Q. 9 Explain (20)
- (a) Delay Little's Formula (b) Burke's Theorem

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<b>Program:</b>	<b>M. Tech (ECE)</b>	<b>Year/Semester:</b>	<b>3<sup>rd</sup> Sem.</b>
<b>Course/Subject:</b>	<b>Digital Signal Processors &amp; Applications</b>	<b>Duration:</b>	<b>03:00 Hrs.</b>
<b>Course/Subject Code:</b>	<b>13130308</b>	<b>Maximum Marks:</b>	<b>100</b>
<b>Roll No.:</b>			

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3. Attempt any five questions. Q.1 is compulsory. Attempt other five questions by selecting one questions from each unit. Parts of a question should be attempted in sequential order. Marks are indicated against each question.
4. Illustrate your answer with diagram wherever required.

- Q.1 Explain the following: (20)
- a) Explain ALU
  - b) Explain Loop with example
  - c) What are IIR filter
  - d) What are AGU

**UNIT-I**

- Q.2 Write a brief note on addressing modes (20)
- Q.3 Explain Harvard architecture (20)

**UNIT-II**

- Q.4 Explain in detail various instruction format for DSP 56002 (20)
- Q.5 Write note on (20)
- (a) Instructions Set
  - (b) Bit manipulation with example
  - (c) Arithmetic Logic instructions

**UNIT-III**

- Q.6 Explain design of FIR filters (20)
- Q.7 Synthesis IIR filters (20)

**UNIT-IV**

- Q.8 Explain TMS-320 architecture (20)
- Q.9 Write a note on instruction set of TMS-320 architecture (20)

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