



PRESIDENCY UNIVERSITY

BENGALURU

Roll No.														
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Mid - Term Examinations – October 2025

Date: 11-10-2025

Time: 02.00pm to 03.30pm

School: SOCSE	Program: Computer Science and Technology	
Course Code : CSD2017	Course Name: Introduction to Neural Networks and fuzzy Logic	
Semester: V	Max Marks: 50	Weightage: 25%

CO - Levels	C01	C02	C03	C04	C05
Marks	26	24			

Instructions:

- (i) Read all questions carefully and answer accordingly.
- (ii) Do not write anything on the question paper other than roll number.

Part A

Answer ALL the Questions. Each question carries 2marks.

5Q x 2M=10M

1	What is the key difference between a biological neuron and an artificial neuron?	2 Marks	L1	C01
2	What is the main limitation of a single-layer perceptron?	2 Marks	L1	C01
3	What is the purpose of the backpropagation algorithm in training neural networks?	2 Marks	L1	C01
4	What is the main role of a convolutional layer in a CNN?	2 Marks	L1	C02
5	What is a key feature that distinguishes RNNs from feedforward networks?	2 Marks	L1	C02

Part B

Answer the Questions.

Total Marks 40M

6.		Compare and contrast biological neurons with artificial neurons.	10 Marks	L2	C01
Or					
7.		Discuss the structure of a single-layer perceptron with formulas.	10 Marks	L2	C01

8.		Describe different types of activation functions used in neural networks.	10 Marks	L2	C01
Or					
9.		Describe the backpropagation algorithm with formulas.	10 Marks	L2	C01

10.		Explain the architecture and working of a Multilayer Perceptron with formulas (MLP).	10 Marks	L2	C02
Or					
11.		Describe the architecture of a Convolutional Neural Network with Layers with formulas.	10 Marks	L2	C02

12.		What are Recurrent Neural Networks (RNNs)? Explain their architecture and applications with layers and formulas.	10 Marks	L2	C02
Or					
13.		Explain Computer vision and Speech processing.	10 Marks	L2	C02