

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATION- 2024

M.Tech-I Semester (ECE)

COURSE CODE (CREDITS): 21M1WEC149 (3)

MAX. MARKS: 25

COURSE NAME: Computational Intelligence and Applications

COURSE INSTRUCTORS: Dr. Shruti Jain

MAX. TIME: 1 Hour 30 Minutes

Note: (a) All questions are compulsory.

(b) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems

Q.N o	Question	CO	Marks
Q1	i. What is the architecture of a Recurrent Neural Network (RNN), and what problems does it solve? ii. What is the difference between feed forward network and RNN?	CO-3	2.5 + 2.5
Q2	i. What is a neuron and how does it function in a neural network? ii. What are activation functions, and why are they important in neural networks? iii. How do weights and biases influence the learning process in neural networks? Explain with any one application	CO-4	1 + 2 + 2
Q3	How do Convolutional Neural Networks (CNNs) differ from traditional neural networks? Explain using any application.	CO-4	5
Q4	i. What is supervised learning, and what are its key characteristics? ii. How does back propagation work in training a neural network? Explain with any one application.	CO-3	2.5 + 2.5
Q5	Implement two input Exclusive OR gate using neural network.	CO-3	5