



End Semester/Reappear (Semester VII) Examination December, 2024

Programme: B. Tech CSE
Course: Deep Learning
Course Code: 3TECCS411
Enrolment no. _____

Full Marks: 70
Time: 3 Hrs.

Q. No.	Questions	CO	Bloom Taxonomy Category	Marks
Section I				
1	Short Answer type questions			4 x 5 = 20
a	Categorize different types of Deep Learning framework.	CO1	Understand	
	or			
b	Explain perceptron.	CO1	Understand	
	or			
	Explain vanilla encoders.	CO2	Understand	
c	or			
	Describe gradient descent.	CO2	Understand	
	Determine the shape of output matrix of an image of size 19 x 19 that uses a 3 padding, size 2, stride size 2, and a 5 x 5 filter.	CO2	Apply	
d	or			
	State the drawback of rectified Linear Unit	CO2	Understand	
	Differentiate between LSTM and GRU.	CO3	Analyze	
	or			
	Compare and contrast stateful and stateless LSTMS.	CO3	Understand	
Section II				
Long Answer type questions				
2	Explain back propagation algorithm for neural network training. Evaluate the error propagation phase in the backward direction.	CO1	Evaluate	3 x 10 = 30
	or			
3	Explain the concept of deep feed forward neural networks.	CO1	Analyze	
	or			
	Explain the Architecture of Convolution Neural Networks in detail.	CO3	Understand	
4	or			
	Explain the working of Gated Recurrent Unit.	CO3	Analyze	
	Explain the working of Reinforcement learning . Also describe the different components of reinforcement leaning and its application in robotics.	CO4	Analyze	
	or			
	Explain any two Deep learning algorithms and their performance factors.	CO4	Analyze	
Section III				
Application based questions				
5	Explain transformer. Classify the different types of transformers. Discuss the features of any two-transformer based model.	CO4	Analyze	1 x 20 = 20
	or			
	Demonstrate the design principles for classifying the real images in a meta dataset using deep learning.	CO4	Analyze	

COURSE OUTCOME

At the end the course the candidate will able to

CO1: Explore feed forward networks and Deep Neural networks

CO2: Mathematically understand the deep learning approaches and paradigms

CO3: Complex feature extraction with CNN and RNNs

CO4: Apply the deep learning techniques for various applications