Reg. No.												

Question Paper Code	11543

B.E./B.Tech. - DEGREE EXAMINATIONS, NOV/DEC 2022

Fifth Semester

Artificial Intelligence and Data Science

20AIPC502 - DEEP LEARNING

(Regulations 2020)

Duration: 3 Hours | Max. Marks: 100

PART - A (10 × 2 = 20 Marks)

Answer ALL Questions

		Marks, K-Level, CO
1.	Enumerate the salient features of Neural Network	*2,K2,CO1*
2.	Give the basic elements of a Biological Neuron.	*2,K1,CO1*
3.	How many types of activation function are available?	*2,K1,CO2*
4.	What do you understand by Boltzmann Machine?	*2,K1,CO2*
5.	Define Convolution operation.	*2,K1,CO3*
6.	Why do we prefer Convolutional Neural networks (CNN) over Artificial Neural networks (ANN) for image data as input?	*2,K2,CO3*
7.	Design a Encoder-Decoder model with RNN.	*2,K1,CO4*
8.	Differentiate exploding gradients and vanishing gradients.	*2,K1,CO4*
9.	List the different types of GANs.	*2,K1,CO5*
10.	What is the technology used in deep fake?	*2,K1,CO5*

PART - B (5 × 13 = 65 Marks)

Answer ALL Questions

11.	a)	Explain the fundamentals of Artificial neural networks.	*13,K2,CO1*
		OR	
	b)	What is regularization? How does Regularization help reduce Over fitting?	*13,K2,CO1*
12.	a)	Describe the various Activation functions RELU, LRELU and ERELU.	*13,K2,CO2*
		OR	
	b)	Write a detailed note on Unsupervised Training of Neural Networks.	*13,K2,CO2*
13.	a)	Explain the operations of stacking, striding and pooling in a CNN with necessary examples.	*13,K1,CO3*

OR

b) Illustrate the Resnet and its detailed concepts. *13,K2,CO3*

14. a) Elaborate on Bidirectional RNN with its architectural design. *13,K1,CO4*

OR

b) Describe Encoder-Decoder sequence to sequence architecture. *13,K1,CO4*

15. a) Explain Generative Neural Networks in detail. *13,K2,CO5*

OR

b) Discuss the recent trends on designing deep learning solutions for fake fingerprints. *13,K3,CO6*

PART - C (1 × 15 = 15 Marks)

16. a) Explain unfolding computational graphs. *15,K2,CO3*

OR

b) Describe Deep Recurrent Neural Networks architecture with example. *15,K2,CO4*