Reg. No. : | | | | | | | | | | | | |

Question Paper Code: U6E02

B.E./B.Tech. DEGREE EXAMINATION, APRIL 2024

Sixth Semester

Artificial Intelligence & Data Science

21UAD602 - DEEP LEARNING

(Regulations 2021)

Duration: Three hours | Maximum: 100 Marks

Answer All Questions

PART A - (10 x 2 = 20 Marks)

1.	Compare Deep Learning and Transfer Learning	CO1-U	
2.	Define Tensors.	CO1-U	
3.	Write the Activation Function in Neural Networks with real time applications.	CO2-App	
4.	Define Neural Networks.	CO1-U	
5.	Define Autoencoders.	CO1-U	
6.	What is meant by Generative Adversarial Networks?	CO1-U	
7.	Define feature extraction in deep learning.	CO1-U	
8.	Define Data preprocessing.	CO1-U	
9.	Predict the concept of gated RNNs.	CO1-U	
10.	What is meant by LSTM?	CO1-U	

PART – B (5 x 16= 80 Marks)

11.	(a)	Explain in detail about Tensors operations.	CO1-U	(16)
		Or		
	(b)	Explain in detail about scalars and vectors with real time applications	CO1-U	(16)
12.	(a)	Examine the L1 & L2 Regularization Sparsity techniques with suitable examples.	CO2-App	(16)
		Or		
	(b)	Apply the Back propagation learning Algorithm with examples.	CO2-App	(16)

13. (a) Illustrate Deep belief Networks CO1-U (16)

Or

(b) Explain Recursive Neural Networks with applications CO1-U (16)

14. (a) Consider the following image CO3-Ana (16)

Analyze the different feature extraction techniques using Principal Component Analysis (PCA)

Or

(b) Analyze in detail about pretrained convents architectures with suitable examples. CO3-Ana (16)

15. (a) Explain the LSTM and its operations CO1-U (16)

Or

(b) Explain Major architectures of Gated Recurrent Units(GRU). CO1-U (16)