QP Code:RM21BTECH511 | Reg. No | | | | | | | | | | | AY 21

GIET UNIVERSITY, GUNUPUR – 765022

B. Tech (Sixth Semester Regular) Examinations, May – 2024

21BCMPE36001 - Deep Learning

(CSE - AIML)

Time: 3 hrs | Maximum: 70 Marks

(The figures in the right hand margin indicate marks)

PART – A **(2 x 5 = 10 Marks)**

Q.1. Answer ***ALL*** questions	CO #	Blooms Level
a. What is K-fold cross validation?	CO1	K1
b. What are the applications of Long Short Term Memory?	CO3	K1
c. Differentiate between encoder and decoder.	CO4	K2
d. What are the different types of RNN topologies?	CO1	K1
e. Define Adam Optimizer.	CO2	K2

PART – B **(15 x 4=60 Marks)**

Answer ***ALL*** questions		Marks	CO #	Blooms Level
2. a.	What are the different challenges faced by deep neural networks? Explain its types.	8	CO2	K2
b.	Explain the key operation of linear algebra used for deep learning with example.	7	CO1	K1
	(OR)			
c.	What is Recurrent Neural Network (RNN)? Write its applications and what are the challenges in training RNN.	8	CO3	K1
d.	Compare Supervised, Unsupervised and Semi Supervised learning.	7	CO1	K1
3.a.	What is Convolution Neural Network? Explain pooling , padding and convolution operation with the help of examples	8	CO3	K1
b.	Compare machine learning and deep learning. Explain the few real time applications of deep learning.	7	CO1	K2
	(OR)			
c.	Explain the importance of Greedy layer wise pre training in deep neural network.	7	CO2	K2
d.	Explain the dimensionality reduction and classification principles used in auto encoder.	8	CO4	K1
4.a.	Write a short note on Tensor flow library.	8	CO1	K1
b.	What is Long Short Term Memory (LSTM)? Explain its architecture and working mechanism.	7	CO3	K2
	(OR)			
c.	Why optimization is required in deep neural network? Compare the working mechanism of Adam and Adagrad optimizers.	8	CO2	K2
d.	Differentiate between Under complete and De- noising auto encoder.	7	CO4	K2
5.a.	What is activation function? Explain in detail regarding different type of activation function used in deep neural network.	7	CO2	K2
b.	Write Short Notes on: (i) Image Net (ii) VGG Net	8	CO3	K1
	(OR)			
c.	Discuss the importance of Dimensionality reduction and Cross validation in deep learning. Explain K- Fold Cross validation.	8	CO1	K1
d.	Explain the applications of auto encoder in image dimensionality reduction.	7	CO2	K2

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