BONAM VENKATA CHALAMAYYA INSTITUTE OF TECHNOLOGY & SCIENCE(AUTONOMOUS)

II - M.Tech III-Semester Regular Examinations (BR23), Dec - 2024
DEEP LEARNING (CSE)

Time: 3 hours   Max. Marks: 75

Answer any Five Questions One Question for One UNIT
ALL the Question Carry Equal Marks

UNIT-I	Marks	CO	BL
1.a) Outline the key features of three learning paradigms in detail.	7M	CO1	BL2
b) Demonstrate various applications of ANN with suitable examples. Relate it with deep learning models.	8M	CO1	BL2
OR			
2.a) Explain various issues in designing a Deep Learning framework	7M	CO1	BL2
b) Explain how the classification problem is solved using a multilayer neural network	8M	CO1	BL2

UNIT-II	Marks	CO	BL
3.a) Discuss various fundamental issues while training a neural network. Explain the role of loss function in it.	7M	CO2	BL2
b) Explain the features of the Markov network. How it works with probabilities?	8M	CO2	BL2
OR			
4.a) Discuss the procedure to select a model that fits the requirements? How do you optimize the model?	7M	CO2	BL1
b) Outline the importance of conditional random fields in training neural networks	8M	CO2	BL2

UNIT-III	Marks	CO	BL
5.a) Explain the working layers of deep neural networks and Discuss various steps involved in training deep models.	7M	CO3	BL2
b) Explain the architecture of RNN with a neat sketch. Decribe its performance metrics.	8M	CO3	BL2
OR			
6.a) Outline the importance of CNN with suitable examples and explain its working prInciples.	7M	CO3	BL2
b) Explain how regularization is vital in deep learning. Write the training algorithm for deep models	8M	CO3	BL2

UNIT-IV	Marks	CO	BL
7.a) Outline the basic features of probabilistic neural networks. How did they implement memorizing concepts?	7M	CO4	BL1
b) Explain the architecture of the Autoencoder with an example	8M	CO4	BL2
OR			
8.a) Discuss the working of the Sigmoid net with suitable examples.	7M	CO4	BL2
b) Compare and contrast the features of Hopfield Net and sigmoid net	8M	CO4	BL2

	UNIT-V	Marks	CO	BL
9.a)	Discuss the basic features of Caffe and its application in sparse encoding	7M	CO5	BL2
b)	Explain the applications of deep learning in computer vision.	8M	CO5	BL2
	OR			
10.a)	Explain the applications of deep learning in NLP. How it classifies the text documents?	7M	CO5	BL2
b)	Compare the features of deep learning tools, Theano and Torch.	8M	CO5	BL2

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Course Outcomes:
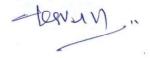After the completion of the course, student will be able to

CO-1: Demonstrate the basic concepts fundamental learning techniques and layers.

CO-2: Discuss the Neural Network training, various random models.

CO-3: Explain different types of deep learning network models.

CO-4: Classify the Probabilistic Neural Networks.

CO-5: Implement tools on Deep Learning techniques.

II Year M.Tech III-Semester

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