

HALL TICKET NUMBER

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PACE INSTITUTE OF TECHNOLOGY & SCIENCES::ONGOLE

(AUTONOMOUS)

IV B.TECH I SEMESTER END REGULAR EXAMINATIONS, NOV-2022

DEEP LEARNING

(CSIT Branch)

Time: 3 hours

Max. Marks: 60

Note: Question Paper consists of Two parts (Part-A and Part-B)

PART-AAnswer **all** the questions in Part-A (5X2=10M)

- 1 a) Define Deep Learning. [2M]
- b) What does ReLU activation function do? [2M]
- c) List out the Hyperparameter Optimization methods? [2M]
- d) What is the difference between LSTM and RNN? [2M]
- e) Write different types of layers in deep learning? [2M]

PART-BAnswer **One Question from each UNIT (5X10=50M)**

UNIT-I

- 2 a. What are the Differences Between Machine Learning and Deep Learning? [5 M]
 - b. How do you create Computational Graph using TensorFlow? [5 M]
- (OR)
- 3 a. Explain the difference between Classification and Regression? [4 M]
 - b. Write short notes on types of Perceptron Models. [6 M]

UNIT-II

- 4 a. Discuss about Backpropagation algorithm. [5 M]
 - b. Explain about Perceptron training rule? [5 M]
- (OR)
- 5 a. Explain Sigmoid and Softmax activation functions? [5 M]
 - b. What are the different types of Gradient Decent? [5 M]

UNIT-III

- 6 a. What is Overfitting and how can you avoid it? [4 M]
 - b. Discuss about the techniques of Regularization? [6 M]
- (OR)

- 7 Briefly explain about Adversarial Generative Networks[AGN]? [10M]

UNIT-IV

- 8 a. Explain the working process of Convolutional Neural Networks? [6 M]
 - b. What are the advantages and disadvantages of Recurrent Neural Network? [4 M]
- (OR)
- 9 a. Discuss about the Unfolded RNNs and Seq2Seq RNNs architecture. [5 M]
 - b. Explain the working of each Recurrent Unit in Recurrent Neural Networks? [5 M]

UNIT-V

- 10 a. Define Image Processing. What are the main challenges of Image Processing? [5 M]
 - b. What are the benefits and challenges of natural language processing? [5 M]
- (OR)
- 11 a. Write short notes on Speech Recognition. [5 M]
 - b. What is Natural Language Processing? What are the techniques and methods of NLP? [5 M]
