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(FOR THE CANDIDATES ADMITTED

24PCS3E1

DURING THE ACADEMIC YEAR 2024 ONLY)

REG.NO. :

N.G.M.COLLEGE (AUTONOMOUS) : POLLACHI

END-OF-SEMESTER EXAMINATIONS : NOVEMBER 2025

M.SC. COMPUTER SCIENCE(SF)

MAXIMUM MARKS: 75

SEMESTER: III

TIME : 3 HOURS

24PCS3E1 : DEEP LEARNING

SECTION - A

(10 X 1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS. (K1)

MULTIPLE CHOICE QUESTIONS.

- 1) Which of the following is a Supervised Learning Algorithm?
a) K-Means b) PCA c) Decision Tree d) Apriori
- 2) What is the purpose of Batch Normalization?
a) Reduces bias b) Accelerates training and improves stability
c) Increases overfitting d) Adds noise to data
- 3) Which layer is primarily used for feature extraction in CNNs?
a) Pooling b) Fully Connected c) Convolutional d) Input
- 4) What is the main purpose of an Autoencoder?
a) Classification b) Dimensionality reduction c) Regression d) Clustering
- 5) Which of the following is a Deep Learning Architecture for vision tasks?
a) AlexNet b) RNN c) LSTM d) BERT

ANSWER THE FOLLOWING IN ONE (OR) TWO SENTENCES (K2)

- 6) What is Linear Separability?
- 7) Define “Backpropagation”.
- 8) What is the role of LSTM in RNNs.
- 9) Relate the function of an Encoder in an Autoencoder.
- 10) Give one application of Deep Learning in Vision.

SECTION – B (5 X 5 = 25 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS. (K3)

- 11) a) Discover the functions of Multilayer Perceptron.

(OR)

- b) Examine the Curse of Dimensionality.

Ethical paper

(CONT...2)

- 12) a) Determine the platform for Deep Learning.
(OR)
b) Evaluate the process of Hyper Parameter Tuning.
- 13) a) Summarize the operations of Convolution Neural Network.
(OR)
b) Estimate the basic functions of Recurrent Neural Network.
- 14) a) Show the requirements of Regularized Auto Encoder.
(OR)
b) Outline the importance of Stochastic Auto Encoder.
- 15) a) Illustrate the advantages of GoogleNet.
(OR)
b) Describe the Triplet Loss function in Deep Learning.

SECTION-C**(5 X 8 = 40 MARKS)****ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS. (K4 (Or) K5)**

- 16) a) Compare and construct Supervised and Unsupervised training algorithm.
(OR)
b) Analyze the implementation of Perceptron Learning Algorithm.
- 17) a) Demonstrate the requirements to build DNN.
(OR)
b) Assess the various types of Gradient Descent functions.
- 18) a) Identify the Long Short Term Memory with Keras.
(OR)
b) Elucidate the functions of Bidirectional LSTMs and Bidirectional RNN.
- 19) a) Predict the classification using Auto Encoders.
(OR)
b) Evaluate the Denoising Auto Encoder with diagram.
- 20) a) Integrate the general architecture of AlexNet to ResNet.
(OR)
b) Elaborate on the security requirements of Siamese Networks.
