Sub Code: SAI401 **ROLL NO……..……..**

EVEN SEMESTER EXAMINATION, 2022 – 23

IInd yr B.Tech– Electronics & Communication Eng

Deep Machine Learning with Visual Computing

Duration: 3:00 hrs **Max Marks: 100**

Note: - Attempt all questions. All Questions carry equal marks. In case of any ambiguity or missing data, the same may be assumed and state the assumption made in the answer.

Q 1.	Answer any four parts of the following. a) Explain Tensorflow and its application in Machine learning. b) Discuss Convolution Neural network with diagram. c) Differentiate between denoising and sparse autoencoders. d) What is a gradient descent and list variant of gradient descent? e) Describe model selection and evaluation parameters. f) Define Recurrent neural network and state its applications.	5x4=20
Q 2.	Answer any four parts of the following. a) Distinguish between underfitting and overfitting. b) How is classification done with a perceptron model. c) Explain different types of cost functions. d) Write a short note on deep learning. e) Differentiate between SGD and ADAM. f) Give a brief account of Visual computing with its applications.	5x4=20
Q 3.	Answer any two parts of the following. a) Discuss in detail LeNet and AlexNet model. b) Explain ResNet and DenseNet model in deep learning with diagram. c) Elaborate on Convolution neural network building blocks.	10x2= 20
Q 4.	Answer any two parts of the following. a) Discuss Region Proposal Networks and list its features. b) Explain how transfer learning is performed on GoogleNet. c) What is activation pooling for object detection.	10x2= 20
Q 5.	Answer any two parts of the following. a) Explain semantic segmentation with CNN. b) How are Adversial autoencoders used for classification. c) Discuss how feature extraction done in deep learning.	10x2= 20

****