

Duration: 3hrs

[Max Marks:80]

- (1) Question No 1 is Compulsory.
- (2) Attempt any three questions out of the remaining five.
- (3) All questions carry equal marks.
- (4) Assume suitable data, if required and state it clearly.

- 1 Attempt any **four** [20]
- a) What are Feed Forward Neural Network?
 - b) Explain Gradient Descent in Deep Learning.
 - c) Explain the dropout method and it's advantages.
 - d) What are Undercomplete Autoencoders?
 - e) Explain Pooling operation in CNN.
- 2 a) What are the Three Classes of Deep Learning, explain each? [10]
b) Explain the architecture of CNN with the help of a diagram. [10]
- 3 a) What are the different types of Gradient Descent methods, explain any three of them. [10]
b) Explain main components of an Autoencoder and it's architecture. [10]
- 4 a) Explain LSTM model, how it overcomes the limitation of RNN. [10]
b) What are the issues faced by Vanilla GAN models? [10]
- 5 a) What are L1 and L2 regularization methods? [10]
b) Explain any three types of Autoencoders. [10]
- 6 a) What is the significance of Activation Functions in Neural Networks, explain different types Activation functions used in NN. [10]
b) What are Generative Adversarial Networks, comment on it's applications. [10]
