

Total No. of Questions : 8]

SEAT No. :

P-613

[Total No. of Pages : 2

[6004]-565

B.E.(Information Technology)

DEEP LEARNING

(2019 Pattern) (Semester - VII) (414443)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates :

- 1) Answer Q1 or Q2, Q3 or Q4, Q5 or Q6, Q7 or Q8.
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Figures to the right indicate full marks.
- 4) Assume suitable data, if necessary.

Q1) a) Differentiate between Recurrent Neural Network and Recursive Neural Network with appropriate diagram [9]

b) Explain the general layout of a Long Short-Term Memory Network (LSTM) with suitable diagram. [9]

OR

Q2) a) Explain how sequence to sequence model works. [9]

b) Describe Recursive Neural Network and types of Recursive Neural Network. Explain its advantages. [9]

Q3) a) Explain the architecture of sparse autoencoder with suitable diagram. What are advantages of sparse encoder over usual autoencoder? [9]

b) State applications of autoencoder. Explain any two applications in detail. [8]

OR

Q4) a) Explain the structure of regularized autoencoders. What is the purpose of sparsity constraint in sparse autoencoder? [9]

b) Explain architecture of autoencoder with neat diagram. Explain the hyperparameters that must be set before training of autoencoders. [8]

P.T.O.

- Q5)** a) When will you transfer learning? Explain with example. [9]
b) Explain architecture of DenseNet. [9]

OR

- Q6)** a) Why is the network called Greedy Layer Wise Pretraining Network? [9]
b) Write Short note on i) Representation Learning ii) Distributed Representation. [9]

- Q7)** a) Explain CNN based and RNN based framework for natural language processing. [9]
b) Describe deep learning based recommender systems with suitable diagram. [8]

OR

- Q8)** a) Illustrate the social network analysis using deep learning and enlist the applications of social network analysis. [9]
b) What are the application areas of image classification? Explain CNN for image Classification. [8]
