

Total No. of Questions : 8]

SEAT No. :

PE2271

[6584]-175

[Total No. of Pages : 2

B.E. (Information Technology)

DEEP LEARNING

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

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) Answer Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8.
- 2) Assume suitable data, if necessary.
- 3) Neat diagrams must be drawn wherever necessary.
- 4) Figures to the right indicate full marks.

Q1) a) What type of neural network is preferred for sequence modeling? Why? State other applications with architectural diagrams for this type of neural network. [9]

b) How RNN is different than simple neural network? Draw architecture diagram and explain functioning. [9]

OR

Q2) a) What type of neural network is preferred for hierarchical data analysis? Why? State other applications with architectural diagrams for this type of neural network. [9]

b) Differentiate among RvNN, RNN and FFNN. [9]

Q3) a) What is encoder-decoder architecture pattern? Where is it used? [8]

b) What is a regularized auto-encoder? Where is it used? [9]

OR

Q4) a) Write a short note on - Applications of autoencoders. [8]

b) Differentiate among contractive autoencoders and Stochastic autoencoders. [9]

Q5) a) What are the variants of CNN? Explain any one in detail. [9]

b) Explain the concept of domain adaptation with suitable examples. [9]

OR

P.T.O.

- Q6)** a) Explain the concept of distributed presentation with suitable examples.[9]
b) What is greedy layer-wise pre-training network? [9]

- Q7)** a) How are deep learning techniques used in NLP systems? Explain with diagrams. [8]
b) Explain deep learning-based recommender systems with suitable diagrams. [9]

OR

- Q8)** a) Explain the role of CNNs in computer vision. [8]
b) How is social network analysis done using deep learning architectures?[9]

