

Total No. of Questions : 8]

SEAT No. :

**P6630**

[Total No. of Pages : 2

**[6181]-193**

**B.E. (Information Technology)**

**DEEP LEARNING**

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

*Time : 2½ Hours]*

*[Max. Marks : 70*

*Instructions to the candidates:*

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

- Q1)** a) Discuss Feed-Forward Neural Networks vs Recurrent Neural Networks. [8]  
b) Explain Recurrent Neural Networks and types of Recurrent Neural Networks. [9]

OR

- Q2)** a) Explain Long Short-Term Memory Networks (LSTM) in detail. [8]  
b) Explain Encoder Decoder architectures, Recursive Neural Networks. [9]

- Q3)** a) Discuss different types of Applications of Autoencoders. [9]  
b) Describe Denoising Autoencoders, Contractive Autoencoders. [9]

OR

- Q4)** a) Explain Regularized Autoencoders-Sparse Autoencoders. [9]  
b) State and explain Undercomplete Autoencoders. [9]

- Q5)** a) Discuss Greedy Layer wise Pre-training methods. [9]  
b) Explain Dense Net in detail. [9]

OR

**P.T.O.**

- Q6)** a) Elaborate Variants of CNN in detail. [9]  
b) Explain Transfer Learning and Domain Adaption. [9]

- Q7)** a) Discuss Speech Recognition using Deep Learning. [9]  
b) Explain Recommender system in detail. [8]

OR

- Q8)** a) What are Image Classification Techniques. [9]  
b) Explain Natural Language Processing in detail. [8]

