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SEAT No. :

**P5247**

[Total No. of Pages : 1

[6188]-202

**B.E. (Information Technology) (Insem)  
DEEP LEARNING  
(2019 Pattern), (Semester -VII) (414443)**

*Time : 1 Hour]*

*[Max. Marks : 30*

*Instructions to the candidates:*

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

**Q1) a)** Explain following terms related to multi-layer feed-forward networks. [5]

- i) Biases
- ii) Activation functions

- b) Explain loss function for regression operation. [5]
- c) Define and explain the significance of learning rate of a model? [5]

OR

**Q2) a)** Explain loss function for classification operation. [5]

- b) Differentiate among RELU, LRELU and ERELU. [5]
- c) What is regularization? Explain the need for regularization. [5]

**Q3) a)** Explain the following hyper parameters for the convolutional layer. [8]

- i) Filter size
- ii) Output depth
- iii) Stride
- iv) Zero-padding

- b) Explain convolution operation in CNN with a suitable example. Take 5\*5 input data, 3\*3 kernel data and calculate convoluted features. [7]

OR

**Q4) a)** Draw and explain architecture of AlexNet. [7]

- b) Explain any four applications of CNNs with suitable diagrams. [8]

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