2015
B.E. (Information Technology)
Sixth Semester
OEIT-601: Deep Learning

Time allowed: 3 Hours   Max. Marks: 50

NOTE: *Attempt <u>five</u> questions in all, including Question No. 1 which is*
                 compulsory and selecting two questions from each Unit.

x-x-x

1. a) Write the main purpose of using guided back propagation in CNNs.

    b) What is the central objective of skim gram model?

    c) Define overfitting.

    d) What is the role of activation function in deep learning?

    e) Write any two limitations of PCA.   (5x2)

UNIT- I

2. a) Define perceptrons. Write and explain the perceptron learning algorithm.

    b) What is the concept of sigmoid neurons?   (5,5)

3. What are feedforward neural networks? How parameters are learnt in a feedback neural
    networks?   (10)

4. a) Describe momentum based gradient descent.

    b) What is the principal component analysis (PCA)? Where do we need PCA?   (5,5)

UNIT-II

5. a) Explain the terms: true error and model complexity.

    b) Describe the procedure to accomplish a reasonable model complexity. (5,5)

6. a) Explain the concept of distributed representation of words.

    b) What is the link between convolution and neural networks?   (5,5)

7. Write a short note on:

    a) ResNet

    b) Gated Recurrent Units   (5,5)

x-x-x