PRESIDENCY UNIVERSITY
BENGALURU

SCHOOL OF ENGINEERING
END TERM EXAMINATION - JUN 2023

Semester : Semester VI - 2020
Course Code : CSE3010
Course Name : Sem VI - CSE3010 - Deep Learning Techniques
Program : CAI&CST

Date : 12-JUN-2023
Time : 9.30AM - 12.30PM
Max Marks : 100
Weightage : 50%

Instructions:
(i) Read all questions carefully and answer accordingly.
(ii) Question paper consists of 3 parts.
(iii) Scientific and non-programmable calculator are permitted.
(iv) Do not write any information on the question paper other than Roll Number.

PART A

ANSWER ALL THE QUESTIONS   **(10 X 2 = 20M)**

1. Give the loss function formula used in contractive Autoencoders.

   (CO3) [Knowledge]

2. What is the formula to update nodes in Hopfield Neural Networks.

   (CO3) [Knowledge]

3. List down the problems of RNN.

   (CO2) [Knowledge]

4. Name two pretrained models that you have come across in CNN.

   (CO3) [Knowledge]

5. Give the formula to construct weight matrix in Hopfield Neural Networks.

   (CO3) [Knowledge]

6. Mention few applications of Deep Belief Networks.

   (CO3) [Knowledge]

7. List down two main differences between Machine and Deep Learning.

   (CO1) [Knowledge]

8. Give the formula to update weights in Boltzmann machine.

   (CO3) [Knowledge]

9. Why RNN is preferred than ANN?

   (CO2) [Knowledge]

10. What are the criterias to select the number of hidden layers in neural networks?

(CO1) [Knowledge]

PART B

ANSWER ALL THE QUESTIONS (5 X 10 = 50M)

11. Briefly explain the activation functions involved in neural networks.

(CO1) [Comprehension]

12. Demonstrate the working of LSTM architecture.

(CO2) [Comprehension]

13. Explain the working of Sparse and Covolutional Autoencoders.

(CO3) [Comprehension]

14. Design and Demonstrate 4-Node Hopfield Neural Networks.

(CO3) [Comprehension]

15. Explain the working of Denoising and Deep Autocoders.

(CO3) [Comprehension]

PART C

ANSWER ALL THE QUESTIONS (2 X 15 = 30M)

16. Describe Deep Belief Networks architecture for the feature extraction before the image classification.

(CO3) [Application]

17. Explain the minmax game strategy involved in Generative Adversarial Networks.

(CO3) [Application]