Avinashilingam Institute for Home Science and Higher Education for Women
(Deemed to be University under Category 'A' by MHRD, Estd. u/s 3 of UGC Act 1956)
Re-accredited with A+ Grade by NAAC. Recognised by UGC Under Section 12B
Coimbatore - 641 043, Tamil Nadu, India

Continuous Internal Assessment –I - February 2025
Semester-II

Class:I PG **Time: 2 Hours**
Branch : Information Technology **Max. Marks: 60**

23MITC08– DEEP LEARNING

Course Outcomes:
CO1 :Identify the fundamentals of Deep Learning and Neurons
CO2 : Discover Feed Forward Neural Networks
CO3 : Apply Neural Networks in Tensorflow
CO4 : Estimate Convolution Networks
CO5 : Structure Markov Decision Processes

Part A **6 x 1 =6**

Choose the Correct Answer

1. _____Learning is a subset of machine learning. CO1 K2
   a) Network b) Device c) Data d)Deep
2. How many layers are there in deep learning? CO1 K1
   a) 2 b) 3 c) 4 d) Output
3. The mini batch gradient descent processes only one training example CO2 K2
   a) One training example b) subset of dataset c) entire dataset d)five training example
4. In Deep Learning gradient descent algorithmis used to _____. CO2 K3
   a) find optimize weight b) maximize loss function
   c) update weight d) tune parameter
5. Forward pass of back propagation algorithm is used to find _____ function. CO2 K3
   a) Summation b) Activation c) Error d) both a and b
6. Data in TensorFlow is represented as tensors, which are _____dimensional Arrays CO3 K2
   a) Single b) Two c) Three d) Multi

Part B **3 x 6 = 18**

Answer ALL questions

Each answer should not exceed 400 words or two pages

7. a.What is deep learning? Why do we need deep learning ? CO1 K1

(Or)

b. What are neurons? Estimate Linear Perceptrons as Neurons. CO1 K5

8. a. Simplify Delta Rule and Learning Rates CO2 K4

(Or)

b.Show Preventing of Overfitting in Neural Networks CO2 K2

9. a. Compare stochastic and mini batch gradient descent CO2 K4

(Or)

b. Organize place holder sensor. CO3 K3

Part C **3 x 12 = 36**

Answer ALL questions

Each answer should not exceed 800 words or four pages

10.a. Elaborate Feed Forward Neural Networks with Diagrams CO1 K6

(Or)

b.Illustrate the Mechanics of Machine Learning CO1 K2

11.a.Demonstrate the steps of gradient descent algorithm with neat diagram CO2 K2

(Or)

b. Explain detail aboutthe Back Propagation Algorithm CO2 K5

12.a. Analyze training sets, validation set and test set. CO3 K3

(Or)

b. Construct TensorFlow Operations CO3 K3

No of Copies: 14