PD105

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T.E. (Artificial Intelligence and Data Science) (Insem)
ARTIFICIAL NEURAL NETWORK
(2019 Pattern) (Semester - II) (317531)

Time : 1 Hour]   *[Max. Marks : 30*
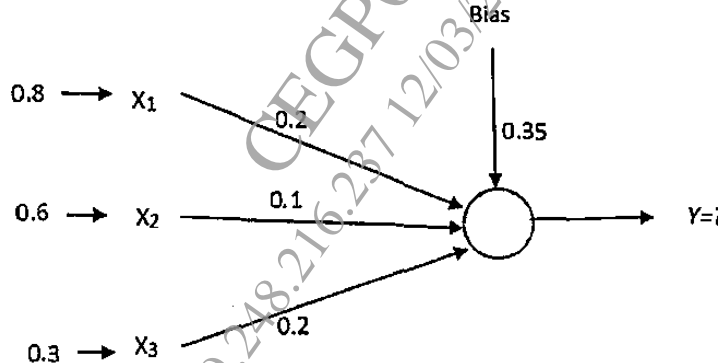
Instructions to the candidates:

1) *Answer Q.1 or Q.2, 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)   What is neural network topology? Explain any three topologies in detail.**[6]**

b)   Explain briefly McCulloch Pitt's (MP) artificial neuron model. Give its limitations. **[5]**

c)   Distinguish between Biological Neural Network and Artificial Neural Networks. **[4]**

OR

Q2) a)   Discuss briefly the structure and function of a biological neuron. **[7]**

b)   Obtain the output of the neuron Y for the network shown in figure using activation function as Binary Sigmoidal and Bipolar Sigmoidal. **[8]**

Q3) a)   Write and explain Hebbian learning Algorithm. **[6]**

b)   What is error correction learning? Explain in detail with diagram. **[5]**

c)   Differentiate between Feed Forward and Feedback neural network. **[4]**

OR

Q4) a)   Draw the architecture of multilayer feed forward networks. Explain input layer, hidden layer & output layer computations in multilayer feed forward networks. **[7]**

b)   Explain perceptron learning algorithm and implement OR function using Perceptron network. **[8]**

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