**Class- Final Year B.Tech. Sem-7 AY- 2023-2024**

**Course: PE3-Deep Learning**

**CCA Component- Theory Assignment (Set-1) Marks-20**

**CO’s Mapped- CO1, CO2**

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| **Q. No** | **Question** | **Marks** | **BTL** |
| 1 | What is Gradient? Explain the role of Gradient Descent algorithm in Deep learning Model. | 4 | 3 |
| 2 | What is loss function? Explain Binary Cross entropy function in detail | 4 | 3 |
| 3 | Consider the above network and answer the following question   1. Dimension of weight matrix and bias of the hidden layer 2. Dimension of input & output | 4 | 4 |
| 4 | Consider the following.    What the output St is obtained by sliding the filter W over the X? | 4 | 4 |
| 5 | Suppose you want to predict employee retention in the company. The description of each input x is given in the figure and also the weight assigned to each of these input is given by W = [w1,w2,w3] and threshold is represented by    Consider the feature vector X=[4,3,2] which means employee who has joined company has more than 5 years of experience in the last company and also offered high salary in the current company. also employees level of job satisfaction is 8. Following weights are assigned to these inputs W= [1.5, 0.7, 1] and =1. Based on these information what do you think will employee will retain in the company? | 4 | 5 |