**Department of CSE - Artificial Intelligence & Data Science**

**SUBJECT : MACHINE LEARNING YEAR / SEM : III-I B. TECH**

**MID II QUESTION BANK**

**UNIT 03**

**EACH QUESTION CARRIES 06 MARKS**

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| **S.NO** | **QUESTIONS** | **CO LEVEL** | **BT LEVEL** |
| **1** | What is meant by Bayesian belief network (BBN)? | **CO3** | **L1** |
| **2** | Explain about Naïve Bayes algorithm for continuous attributes with examples. | **CO3** | **L2** |
| **3** | Explain about Hierarchical clustering algorithm. | **CO3** | **L2** |
| **4** | Identify the challenges of clustering algorithm. | **CO3** | **L3** |
| **5** | List out the disadvantages of clustering schemes | **CO3** | **L1** |
| **6** | Distinguish between classification and Clustering | **CO3** | **L4** |
| **7** | Explain about ARIMA modelling? | **CO3** | **L2** |
| **8** | Explain about time series ? | **CO3** | **L2** |
| **9** | What is dimensionality reduction? | **CO3** | **L1** |
| **10** | Explain about PCA in Dimensionality reduction? | **CO3** | **L2** |

**UNIT 04**

**EACH QUESTION CARRIES 12 MARKS**

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| **S.NO** | **QUESTIONS** | **CO LEVEL** | **BT LEVEL** |
| **1** | a)What is natural language processing?  b)Discuss various stages involved in NLP process with suitable example? | **CO 4** | **L1** |
| **2** | Explain in detail about word to vec? | **CO 4** | **L4** |
| **3** | Explain about Bag of words concept with example? | **CO 4** | **L1** |
| **4** | Discuss in detail about Inverse document frequency with an example? | **CO 4** | **L5** |
| **5** | Explain about term frequency with an example? | **CO 4** | **L6** |
| **6** | Explain about one hot encoding with an example? | **CO 4** | **L5** |
| **7** | Explain about components of NLP? | **CO 4** | **L5** |
| **8** | Explain about applications of nlp like chatbots, virtual agents? | **CO 4** | **L5** |
| **9** | Explain about Steps to get text data into workable format | **CO 4** | **L5** |
| **10** | Explain about notion of corpus? | **CO 4** | **L5** |

**UNIT 05**

**EACH QUESTION CARRIES 12 MARKS**

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| **S.NO** | **QUESTIONS** | **CO LEVEL** | **BT LEVEL** |
| 1 | Construct and explain Artificial Neural network structure | **CO5** | **L1** |
| 2 | Determine activation function and list few activation function with description. | **CO5** | **L5** |
| 3 | 1. Compare biological neuron and artificial neuron 2. Identify the parameters in a perceptron network and its significance | **CO5** | **L1** |
| 4 | Explain Back propagation network? | **CO5** | **L2** |
| 5 | Discuss about Convolution network layer and explain about different layers of CNN? | **CO5** | **L6** |
| 6 | Discuss the steps involved in Back propagation algorithm | **CO5** | **L6** |
| 7 | 1. Apply the formula for sigmoidal function 2. Examine the delta learning rule | **CO5** | **L3** |
| 8 | Explain biological Neuron in detail? | **CO5** | **L2** |
| 9 | a)Explain application of ANN and list the challenges of ANN.  b)list Advantages and disadvantages of ANN. | **CO5** | **L2** |
| 10 | Explain simple model of an Artificial Neuron and its functions. | **CO5** | **L2** |
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i) Regression ii) Residual iii) Kernel Function

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