**Unit1 & Unit2**

Q1)Explain machine learning life cycle?

Q2)explain different type of Machine learning System?

Q3)differentiate between batch and online learning?

Q4)explain the relation between AI,AL,Dl,Ds?

Q5)Explain different type of bias and variance with a suitable graph ?

Q6)Explain different data preprocessing technique?

Q7) What is data normalization? Explain one method with an example?

Q8) Write different applications of machine learning?

Q9) numerical on linear & logistic regression?

Q10)Differentiate between linear and logistic regression?

Q11)Explain the perceptron update rule?

Q12)Explain different type of distribution?

**Unit 3 & Unit4**

Q1)Differentiate between Markov Models and Hidden Markov Models?

Q2)Application of clusterinhg?

Q3)problems on Partitioning clustering ?

Q4)Explain different type of clustering?

Q5)Explain DBSCAN & fuzzy clustering?

Q6)Differentiate between agglomerative and divisive algorithm & numerical?

Q7)numerical on SVM, knn, K-means , decision tree, confusion matrix?

Q8)Differentiate between different type of Naïve Bayes algorithm?

Q9)Explain collaborative filtering?numerical also?

Q10) define-Recall, precision, error, confusion matrix, spectral clustering

**Unit5**

Q1)differentiate between boosting and bagging?

Q2)Explain different type boosting?

Q3)Explain different ensembling learning?

Q4)short notes

a)out-of bag evaluation

b)random forest

c)random patches

d)random subspaces