

Unit wise Question Bank

Unit - I

S. No	Questions	BT	CO	PO
Part – A (Short Answer Questions)				
1	Define Machine learning	L2	CO1	PO1
2	Write about inductive bias.	L3	CO1	PO3
3	Define hypothesis.	L4	CO1	PO5
4	What are issues in decision tree learning?	L5	CO1	PO1
5.	List the basic design issues in machine learning	L4	CO1	PO5
6.	State version space representation theorem	L5	CO1	PO5
7.	Write about inductive bias?	L3	CO1	PO5
Part – B (Long Answer Questions)				
1	What do you mean by Candidate elimination? Explain.	L2	CO1	PO5
2	What are the different types of a Machine Learning models?	L2	CO1	PO5
3	Discuss the issues in decision tree learning algorithm in detail.	L3	CO1	PO5
4	Define Well- posed problems. Illustrate any four examples for Well- posed problems.	L2	CO1	PO5
5	What are the concepts of learning as search?	L3	CO1	PO5
6	What are the appropriate problems for decision tree learning?	L3	CO1	PO5
7	Explain the Find s: finding a maximally specific hypothesis in detail?	L4	CO1	PO5
8	Discuss about decision tree representation in detail and Discuss about the basic Decision tree Learning Algorithm?	L2	CO1	PO5

Unit – II

S. No	Questions	BT	CO	PO
Part – A (Short Answer Questions)				
1	Define hypothesis.	L3	CO2	PO5
2	Write about sampling theory.	L3	CO2	PO4
3	Write about estimation hypothesis accuracy.	L4	CO2	PO5
4	Find out difference in error of two hypotheses	L5	CO2	PO4
5.	What is the representational power of perceptrons?	L2	CO2	PO5
6.	Distinguish between inductive bias and estimation bias	L1	CO2	PO3
7.	Write about sampling theory	L3	CO2	PO2
Part – B (Long Answer Questions)				
1	Explain the Back propagation learning algorithm and its limitations.	L2	CO2	PO5
2	How multilayered networks learn using a gradient descent algorithm?	L3	CO2	PO5
3	Define the terms estimation bias and confidence intervals.	L4	CO2	PO5
4	Explain the methods for comparing the accuracy in two hypothesis.	L4	CO2	PO5
5	Explain the difference in error of two hypothesis.	L4	CO2	PO5
6	Explain in detail about representation of neural networks.	L2	CO2	PO5
7	Explain how to estimate hypothesis accuracy.	L4	CO2	PO5

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Unit – III

S. No	Questions	BT	CO	PO
Part – A (Short Answer Questions)				
1	State Baye's Theorem.	L5	CO3	PO5
2	How Bayes optimal classifier are done.	L6	CO3	PO3
3	Define Bayesian belief networks.	L4	CO3	PO2
4	What are Naïve Bayes classifiers?	L4	CO3	PO1
5.	Define eager learning.	L2	CO3	PO4
6.	What is lazy learning?	L2	CO3	PO3
7.	Elaborate the locally weighted linear regression	L1	CO3	PO2
Part – B (Short Answer Questions)				
1	Differences about k-nearest neighbor algorithm.	L3	CO3	PO4
2	Define Brute Force Bayesian concept learning algorithm and elaborate.	L2	CO3	PO2
3	Explain Maximum Likelihood Hypotheses for predicting probabilities.	L3	CO3	PO1
4	Explain the features of Bayesian Learning Methods	L2	CO3	PO6
5	Discuss the Relationship between the maximum likelihood hypothesis and the least squared error hypothesis	L2	CO3	PO3
6	Describe the mistake bound model of learning	L3	CO3	PO2
7	Discuss the Relationship between the maximum likelihood hypothesis and the least squared error hypothesis	L2	CO3	PO1

Unit – IV

S. No	Questions	BT	CO	PO
Part – A (Short Answer Questions)				
1	Define term Genetic.	L2	CO4	PO2
2	How parallelizing genetic algorithms work.	L3	CO4	PO3
3	Define Dynamic Programming.	L4	CO4	PO6
4	What are models of evolution and learning?	L2	CO4	PO2
5.	What factors contribute to the popularity of genetic algorithm	L1	CO4	PO3
6.	How to use entropy as evolution function	L5	CO4	PO4
7.	Discuss Dynamic Programming	L6	CO4	PO2
Part – B (Short Answer Questions)				
1	Describe the Q-learning with suitable example.	L2	CO4	PO2
2	Define the hypothesis space search with an example.	L4	CO4	PO3
3	Write the basic algorithm for learning sets of first order rules	L3	CO4	PO4
4	Prove E- exhausting a version space theorem	L3	CO4	PO6
5	Discuss briefly about genetic algorithm in detail	L2	CO4	PO5
6	Explain Temporal difference learning in detail	L1	CO4	PO3
7	Discuss about Q learning in detail	L4	CO4	PO2

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Unit – V

S. No	Questions	BT	CO	PO
Part – A (Short Answer Questions)				
1	What is explanation-based learning?	L1	CO5	PO5
2	What are the types of layout managers?	L2	CO5	PO2
3	Define control knowledge.	L3	CO5	PO5
4	What are augment search operators?	L2	CO5	PO7
5	Write about control knowledge	L3	CO5	PO8
6	What are the Limitations of explanation based learning	L1	CO5	PO1
7	What is the essential difference between analytical and inductive learning methods	L1	CO5	PO2
Part – B (Long Answer Questions)				
1	Describe about Explanation-based Learning of Search Control Knowledge.	L2	CO5	PO3
2	Define inductive-analytical approaches to learning using prior knowledge to initialize the hypothesis.	L3	CO5	PO4
3	Explain about Analytical Learning.	L1	CO5	PO6
4	Describe the TANGENT PROP algorithm to train a neural network to fit both training value and training derivatives	L1	CO5	PO2
5	Discuss about augment search operators	L6	CO5	PO1
6	Explain how to initialize the hypothesis by using prior knowledge	L4	CO5	PO5
7	Explain about search control knowledge in detail	L2	CO5	PO5

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