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BTECH
(SEM VIII) THEORY EXAMINATION 2021-22
MACHINE LEARNING

Time: 3 Hours**Total Marks: 70****Note:** Attempt all Sections. If you require any missing data, then choose suitably.**SECTION A****1. Attempt all questions in brief.****2*7 = 14**

Q.no	Questions	Marks	CO
(a)	What is the concept of Decision tree learning?	2	2
(b)	Discuss the basic	2	1
(c)	What are perceptron in Artificial Neural Networks?	2	2
(d)	What do you understand by the Learning problems?	2	1
(e)	What do you mean by the Hypotheses Evaluation?	2	3
(f)	What is the basic concept of Genetic Algorithm?	2	5
(g)	Briefly define about the Computational Learning Theory.	2	4

SECTION B**2. Attempt any three of the following:****7*3 = 21**

Q.no	Questions	Marks	CO
(a)	Explain in detail about the Crossover and Mutation in Genetic Algorithm.	7	5
(b)	Discuss about the concept of models evaluation generated from data.	7	2
(c)	What do you understand by Radial basis function networks under Instance based Learning?	7	3
(d)	Discuss about the concept of Building a smart speaker under Deep Learning in Machine Learning.	7	4
(e)	Discuss in detail about the Issues in Machine Learning and Data Science.		

SECTION C**3. Attempt any one part of the following:****7*1 = 7**

Q.no	Questions	Marks	CO
(a)	What is the concept of Reinforcement Learning? Explain Decision process under the Reinforcement Learning.	7	5
(b)	Explain in detail about the K-Nearest Neighbor Learning instance based learning.	7	2

4. Attempt any one part of the following:**7 * 1 = 7**

Q.no	Questions	Marks	CO
(a)	Discuss about the Historical progress of Machine Learning. What is the concept of Clustering in Machine Learning?	7	1
(b)	Discuss about the latest trends and fields in machine learning with the help of suitable examples.	7	3



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5. Attempt any *one* part of the following:

7*1 = 7

Q.no	Questions	Marks	CO
(a)	Discuss in detail about the designing of appropriate machine learning algorithms and their application to the real-world problems.	7	4
(b)	What are the Components of Genetic Algorithm? Discuss in brief about the Genetic Algorithm cycle of reproduction.	7	5

6. Attempt any *one* part of the following:

7*1 = 7

Q.no	Questions	Marks	CO
(a)	Discuss the concept of Regression. Differentiate Linear Regression and Logistic Regression.	7	2
(b)	What is the need of Bayesian Networks? Discuss about the Issues in Machine Learning.	7	1

7. Attempt any *one* part of the following:

7*1 = 7

Q.no	Questions	Marks	CO
(a)	Discuss in detail about the concept of Inductive bias and Information gain in Decision Tree Learning.	7	3
(b)	What do you understand by Deep Learning? Discuss about the concept and application of Convolutional Neural Network.	7	4