PAPER ID-410977

Subject Code: KOE073

Roll No: | | | | | | | | | | | | | |

B. TECH
(SEM: VII) THEORY EXAMINATION 2021-22
MACHINE LEARNING

Time: 3 Hours ***Total Marks: 100***

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief.

Qno.	Question	Marks	CO
a.	What is purpose of The Inductive Learning Hypothesis	2	CO1
b.	Write the TPE for Handwriting Recognition Problem	2	CO1
c.	What is formula of Information Gain in Decision Tree Learning Algorithm	2	CO2
d.	What is the role of Activation Function in ANN	2	CO2
e.	Differentiate between Bias and Variance in ML	2	CO3
f.	What are Confidence Intervals in ML	2	CO3
g.	What is Lazy Learning	2	CO4
h.	What is K in KNN Learning	2	CO4
i.	What is Value-based reinforcement Learning?	2	CO5
j.	What is The Bellman Equation in Reinforcement Learning	2	CO5

SECTION B

2. Attempt any *three* of the following:

a.	Giving an example, Explain the Concept Learning Task in ML	10	CO1
b.	Explain Adeline Network, highlighting its Advantages over Perception.	10	CO2
c.	What is the Assumption in Naïve Bayesian Algorithm that makes is different from Bayesian Theorem	10	CO3
d.	Differentiate Between Conventional Learning and Instance based Learning	10	CO4
e.	What are the important elements of a Reinforcement Learning Model?	10	CO5

SECTION C

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

a.	What are the Steps involved in Designing a Learning System	10	CO1
b.	Explain Find-S algorithm using an example	10	CO1

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

a.	How does Back Propagation Rule help in Learning in a Neural Network	10	CO2
b.	Discuss various Issue in Decision Tree Learning	10	CO2

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

a.	Differentiate Between sample error and True error	10	CO3
b.	Write short notes on Bayesian belief networks	10	CO3

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

a.	What is Sample Complexity for Finite Hypothesis Spaces	10	CO4
b.	What are the Principles of a Case-based learning?	10	CO4

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

a.	Explain The working of Q Learning Algorithm in Reinforcement Learning	10	CO5
b.	What are the operations involved in Hypothesis Space searching through Genetic algorithm?	10	CO5