



National Institute of Technology, Tiruchirappalli - 15
Department of Computer Science and Engineering

Cycle Test-1

CSPC54 – Introduction to Artificial Intelligence and Machine learning

Course/Department : B.Tech./CSE

Semester/Section : V A

Date and Time : 28-08-2024 & 02.30 PM – 04.30PM

Batch : 2022-2026

Session : July/2024

Marks : 15

Answer ALL Questions with proper steps and justification.
Draw diagrams wherever necessary.

1.	Discuss on Deterministic vs stochastic task environment with examples.	(2)	CO2
2.	Give the PEAS description of the task environment for Smart Home Energy Management System	(2)	CO2
3.	Perform Min-Max method on the following game tree. Find out the Min -Max and node value at each node. What move should be chosen by the MAX player? what is the time complexity?	(3)	CO3
4.	Discuss on the drawbacks of Hill climbing.	(2)	CO1
5.	Explain Iterative Deepening Search Algorithm with an example	(3)	CO3

6.	<p>Consider the statement below.</p> <p>A person who is radical is electable if he/she is conservative, but otherwise is not electable.</p> <p>Convert the above sentences in propositional logic form.</p>	(1)	CO3
7.	<p>Consider the following two statements-</p> <p>S1 : Ticket is sufficient to enter movie theater.</p> <p>S2 : Ticket is necessary to enter movie theater.</p> <p>1.Does S1 entail S2?</p> <p>2.Does S2 entail S1 ?</p> <p>3.Are S1 and S2 logically equivalent? If so, what does this equivalence entail about the conditions for entering the movie theater?</p>	(2)	CO3