

Programme: BCA
Course: Artificial Intelligence
Course Code:3CCC204
Enrolment no. _____

Full Marks: 70
Time: 3 Hrs.

Q.No.	Questions	CO	Bloom Taxonomy Category	Marks
Section I				
1	Short Answer type questions.			
a	Explain Simple Reflex Agents and Goal Based Agents with the help of suitable diagrams.	CO1	Understand	4 x 5 = 20
	or			
b	Describe the concept of 8 puzzle problems.	CO1	Understand	
	or			
c	State and prove Contrapositive property in propositional logic.	CO2	Apply	
	or			
d	Explain how Predicate logic overcomes shortcomings of propositional logic	CO2	Understand	
	or			
e	Describe the Supervised learning & unsupervised learning with an example for each.	CO3	Understand	
	or			
f	Describe the Learning in AI and its types.	CO3	Understand	
	or			
g	Discuss various steps of developing an expert system.	CO4	Remember	
	or			
h	Describe Prolog programming language along with an example.	CO4	Understand	
	or			
Section II				
	Long Answer type questions.			
2	Describe the Approaches to knowledge representation in AI.	CO2	Understand	3 x 10 = 30
	or			
3	Explain different types of knowledge that exist in knowledge representation.	CO2	Understand	
	or			
4	Explain the need of natural language processing. What are the solutions of Natural Language Processing Problems? Discuss.	CO3	Analyze	
	or			
5	Explain the concept of Root learning, Induction Learning and Learning from advice.	CO3	Understand	
	or			
6	Write a Prolog program to represent a family tree using appropriate facts and rules. Also; perform 10 queries based on your family tree.	CO4	Apply	
	or			
7	Analyse the concept of an expert system shell, evaluate its fundamental characteristics.	CO4	Analyze	
	or			
Section III				
	Application based questions			
8	Distinguish between uninformed and informed search? Evaluate some searching algorithm which comes under the category of uninformed and informed search.	CO1	Evaluate	1 x 20 = 20
	or			
9	Analyse and evaluate the different types of AI agents and their respective environments. Provide detailed examples for each type, and create a comparative framework to highlight their strengths and weaknesses in various scenarios.	CO1	Evaluate	
	or			

COURSE OUTCOME

CO1 Demonstrate fundamental understanding of the history of artificial intelligence (AI) and its foundations.

CO2 Apply basic principles of AI in solutions that require problem solving, inference, perception, knowledge representation, and learning.

CO3 Demonstrate awareness and a fundamental understanding of various applications of AI techniques in intelligent agents, expert systems, artificial neural networks and other machine learning models.

CO4 Demonstrate proficiency developing applications in an 'AI language', expert system shell