#### **Artificial Intelligence**

### 1. Remembering:

- Define AI and its applications
- Describe various AI techniques and problems
- Explain the importance of State Space search and its components

### 2. Understanding:

- Differentiate between implicit and explicit graphs in State Space search
- Identify production systems and their role in formulating the state-space
- Discuss the principles of uninformed and informed search algorithms

# 3. Applying:

- Implement breadth first search, depth first search, and Uniform cost algorithm in AI problems
- Utilize heuristic search techniques such as hill climbing, A\* algorithm, and constraint satisfaction in problem-solving scenarios
- Develop intelligent agents and multi-agent systems for specific applications

# 4. Analyzing:

- Evaluate the downsides of intelligent agents and their impact on decision-making
- Critically assess heuristic search algorithms in terms of problem characteristics and applications
- Analyze game playing strategies like Minmax and Alpha-Beta pruning for optimizing decision-making processes

## 5. Evaluating:

- Assess the efficiency of knowledge representation techniques like logic programming and semantic networks
- Compare different approaches to modeling uncertainty in AI systems
- Evaluate learning strategies such as rote learning and learning by examples in AI systems

## 6. Creating:

- Design AI algorithms based on problem characteristics and heuristics
- Develop natural language processing systems using formal and natural language understanding
- Create AI applications with a focus on knowledge representation, uncertainty modeling, and learning techniques.

