

## DRONACHARYA COLLEGE OF ENGINEERING

KHENTAWAS, FARRUKHNAGAR, GURGAON, HR

Department of Computer Science & Engineering

For Class: VI CSIT/IT

Academic Session: (MAY- AUG 2021)

Lecture Plan with Assignment questions

Subject with code: Artificial Intelligence(PCC-CSE-304G)

Name of Faculty with Designation : Mr. Amar Saraswat, Assistant Professor

Month	Date	Day	Sem-Class	Unit	Topic/Chapter covered	Write Lecture Wise Questions
May	5/18/2021	Tuesday	VI CSIT/IT	I	Introduction: Definition of AI, History of AI	Ques 1: Define Artificial Intelligence Ques 2: Explain the major components of AI along with Turing (Imitation) Test
May	5/21/2021	Friday	VI CSIT/IT	I	Nature of AI problems, Examples of AI problems	Ques 1: Explain the various characteristics of AI problems Ques 2: With the help of suitable examples, explain Knowledge Pyramid in detail.
May	5/25/2021	Tuesday	VI CSIT/IT	I	Problem solving by search: Uninformed Search: Depth First Search (DFS)	Ques1: Numerical. Ques2: Numerical
May	5/28/2021	Friday	VI CSIT/IT	I	Breadth First Search (BFS). Informed Search: Best First Search,	Ques1: Numerical. Ques2: Numerical
June	6/1/2021	Tuesday	VI CSIT/IT	I	A*. Local Search: Hill Climbing.	Ques1: Numerical. Ques2: Numerical
June	6/4/2021	Friday	VI CSIT/IT	I	Problem Reduction Search: AO*.	Ques1: Numerical. Ques2: Numerical
June	6/8/2021	Tuesday	VI CSIT/IT	I	Population Based Search: Ant Colony Optimization,	Ques1: Numerical. Ques2: Numerical
June	6/11/2021	Friday	VI CSIT/IT	I	Genetic Algorithm.	Ques1: What is the need of Genetic Algorithm. Explain with the help of a flow chart. Ques 2: How do we evaluate fitness function, explain with the help of suitable example
June	6/15/2021	Tuesday	VI CSIT/IT	I	Game Playing: Min Max Algorithm, Alpha-Beta Pruning.	Ques1: Numerical on Min-Max Algorithm Ques2: Numerical on Alpha-Beta Pruning
June	6/18/2021	Friday	VI CSIT/IT	II	Knowledge Representation: Types of Knowledge,	Que: Explain the following types of Knowledge: i. Domain Specific Knowledge ii. Common Sense Knowledge

June	6/29/2021	Tuesday	VI CSIT/IT	II	Knowledge Representation Techniques/schemes: Propositional Logic,	Que. Explain the inferencing rules in propositional logic. Solve the following problem with the help of these rules: Test the validity of following argument: “If milk is black, then every cow is white. If every cow is white then, it has four legs. If every cow has four legs, then every buffalo is white and brisk. The milk is black. Therefore, the buffalo is white”.
July	7/2/2021	Friday	VI CSIT/IT	II	Predicate Logic, Semantic nets, Frames.	Que. Do the generalizations of the following predicate logics: i. Bhaskar likes aeroplanes ii. Ravi's father is Rani's Father
July	7/6/2021	Tuesday	VI CSIT/IT	II	Knowledge representation issues. Rule based systems.	Ques: Explain Rule based deduction system, in detail.
July	7/9/2021	Friday	VI CSIT/IT	III	Reasoning under Uncertainty: Basics of Probability Theory	Ques. Define probability. Differentiate between conditional and Unconditional Probability
July	7/13/2021	Tuesday	VI CSIT/IT	III	Probabilistic Reasoning, Bayesian Reasoning, Dempster-Shafer Theory.	Que. Explain Dempster Shaffer Theory. How does it remove the disadvantages of Baye's Probability Inference. Using Dempster Shaffer Approach, find the uncertainty of the following prediction.: “There are 80% chances of rain today. However, there is uncertainty regarding the type of cloud cover. Some experts tells he is confident that there are 90% chances of these types of clouds bringing rain.”
July	7/16/2021	Friday	VI CSIT/IT	III	Planning: Introduction to Planning, Representation of Planning, Partial-order Planning.	Que 1.What do you mean by planning? Describe planning in situational calculus. Que 2. With the help of suitable example, Explain Partial Order Planning in detail
July	7/20/2021	Tuesday	VI CSIT/IT	IV	Learning: Introduction to Learning, Types of Learning: Learning by Induction	Ques: Explain the following: i. Learning by analogy ii. Supervised Learning iii. Unsupervised Learning
July	7/23/2021	Friday	VI CSIT/IT	IV	Rote Learning, Symbol Based Learning, Identification Trees,	Ques. Write short notes on:i. Rule based system architecture, ii. Thematic Role Frames.,
July	7/27/2021	Tuesday	VI CSIT/IT	IV	Explanation Based Learning, Transformational Analogy, Introduction to Neural Networks,	Que: Explain the following functions used in ANN: i. Linear Function ii.Heviside Step Function iii.Sigmoid Function
August	8/10/2021	Tuesday	VI CSIT/IT	IV	Expert Systems, Current trends in Artificial Intelligence	Que: Explain the life cycle of Expert System in detail. Que: Enlist the core research areas where AI is being used.



