FUNDAMENTALS OF ARTIFICIAL INTELLEGENCE

Course Code	20IT2702A	**Year**	IV	**Semester**	I
Course Category	**OE4**	**Branch**	IT	**Course Type**	Theory
Credits	3	**L-T-P**	3-0-0	**Prerequisites**	-
Continuous InternalEvaluation:	30	**Semester End Evaluation:**	70	**Total Marks:**	100

Course Outcomes		**Blooms Level**
Upon successful completion of the course, the student will be able to		
CO1	Know the challenges and concepts of AI.	L2
CO2	Solve problems using heuristics search algorithms	L3
CO3	Transform knowledge into rules.	L3
CO4	Demonstrate Symbolic reasoning under uncertainty	L3
CO5	Acquainted with expert systems.	L3

Contribution of Course Outcomes towards achievement of Program Outcomes & Strength of correlations (3:Substantial, 2: Moderate, 1:Slight)

	PO1	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**	**PO11**	**PO12**	**PSO1**	**PSO2**
CO1	3												2	3
CO2		3											3	3
CO3		3											3	3
CO4		3					3						3	3
CO5				3									3	3

Syllabus		
UnitNo	**Contents**	**Mapped CO**
I	What is AI: The AI Problems, What is an AI Techniques, Criteria for Successes? Problems and problem spaces and Search: Problem as a state space search, Production systems, Problem Characteristics, Production system characteristics.	CO1
II	Heuristic search technique: Generate and test, Hill climbing, Best First search, Problem reduction, Constraint satisfaction.	CO1, CO2
III	Knowledge Representation issues: Representations and mappings. Representing knowledge using rules: Procedural knowledge Vs Declarative knowledge, Forward Vs Backward reasoning, matching.	CO3
IV	Symbolic reasoning under uncertainty: Introduction to Non monotonic reasoning, Implementation in DFS and BFS. Weak, strong slot and filler structures: Semantic nets, Frames,	CO4
V	Planning: Goal stack planning, Hierarchical planning Expert Systems: Expert system shells, Knowledge acquisition.	CO5

Learning Recourses
Text Books
1. Artificial Intelligence, 2nd Edition, E.RichandK. Knight (TMH).
References
1. Artificial Intelligence and Expert Systems–Patterson PHI 2. Expert Systems Principles and Programming-Fourth Edn, Giarrantana/Riley, Thomson 3. PROLOG Programming for Artificial Intelligence. Ivan Bratka- Third Edition–PearsonEducation.
e-Resources & other digital material
1. http://www.jntuk-coeerd.in/ 2. http://nptel.ac.in/video.php?subjectId=106105079 3. http://nptel.iitk.ac.in/courses/Webcourse-contents/IIT%20Kharagpur/Artificial%20intelligence/New_index1.html