

ARTIFICIAL INTELLIGENCE LABORATORY (Effective from the academic year 2018 -2019) SEMESTER – V			
Subject Code	18AIL57	CIE Marks	40
Number of Contact Hours/Week	0:2:2	SEE Marks	60
Total Number of Lab Contact Hours		Exam Hours	3 Hrs
Credits – 2			
Course Learning Objectives: This course will enable students to:			
• Implement and evaluate AI algorithms in Python programming language.			
Descriptions (if any):			
Installation procedure of the required software must be demonstrated, carried out in groups and documented in the journal.			
Programs List:			
Practicing Problems in Python(Students can be encouraged to practice good number of practice problems , some practice problems are listed here)			
1.	(a) Write a python program to print the multiplication table for the given number (b) Write a python program to check whether the given number is prime or not? (c) Write a python program to find factorial of the given number?		
2.	(a) Write a python program to implement List operations (Nested List, Length,Concatenation, Membership, Iteration, Indexing and Slicing) (b) Write a python program to implement List methods (Add, Append, Extend & Delete).		
3.	Write a python program to implement simple Chatbot with minimum 10 conversations		
4.	Write a python program to Illustrate Different Set Operations		
5.	(a)Write a python program to implement a function that counts the number of times a string(s1) occurs in another string(s2) (b)Write a program to illustrate Dictionary operations([],in,traversal)and methods: keys(),values(),items()		
AI Problems to be implemented in Python			
1	Implement and Demonstrate Depth First Search Algorithm on Water Jug Problem		
2	Implement and Demonstrate Best First Search Algorithm on any AI problem		
3	Implement AO* Search algorithm.		
4	Solve 8-Queens Problem with suitable assumptions		
5	Implementation of TSP using heuristic approach		
6	Implementation of the problem solving strategies: either using Forward Chaining or Backward Chaining		
7	Implement resolution principle on FOPL related problems		
8	Implement any Game and demonstrate the Game playing strategies		
Laboratory Outcomes: The student should be able to:			
• Implement and demonstrate AI algorithms.			
• Evaluate different algorithms.			
Conduct of Practical Examination:			
• Experiment distribution			
○ For laboratories having only one part: Students are allowed to pick one experiment from the lot with equal opportunity.			
○ For laboratories having PART A and PART B: Students are allowed to pick one experiment from PART A and one experiment from PART B, with equal opportunity.			
• Change of experiment is allowed only once and marks allotted for procedure to be made zero of the changed part only.			
• Marks Distribution (Subjected to change in accordance with university regulations)			
i) For laboratories having only one part – Procedure + Execution + Viva-Voce: 15+70+15 = 100 Marks			
j) For laboratories having PART A and PART B			
i. Part A – Procedure + Execution + Viva = 6 + 28 + 6 = 40 Marks			
ii. Part B – Procedure + Execution + Viva = 9 + 42 + 9 = 60 Marks			