**KLS Gogte Institute of Technology, Belagavi**

**Department of Computer Science and Engineering Academic Year: 2020-21(EVEN SEM)**

**Program: B.E (Computer Science and Engineering) Semester: VI**

**IA Test – I**

**Course Title:** **AI and ML** **Code: 18CS61**

**Max. Marks: 30 (Part B: 25 marks) Duration: 1 Hr. 15 Mins. Date: 31/05/2021**

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| Instructions: | 1. | Part B: Answer any Five Questions. |

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| Q. No. | **PART B** | [L ] | [CO] | [PO] | [M] |
| 1. | Explain strong AI and weak AI methods with an Example. | 2 | 1 | 1 | 5 |
| 2. | Represent and propose the solution for the following problem using Search Tree:  Three missionaries and three cannibals are on one side of a river, with a canoe. They all want to get to the other side of the river. The canoe can only hold one or two people at a time. At no time should there be more cannibals than missionaries on either side of the river, as this would probably result in the missionaries being eaten. | 3 | 2 | 2 | 5 |
| 3. | Demonstrate the problem reduction with respect to towers of Hanoi problem | 3 | 2 | 1 | 5 |
| 4. | Contrast DFID algorithm as compared to DFS and BFS | 2 | 1 | 1 | 5 |
| 5. | Explain the three problems of Hill climbing algorithm | 2 | 1 | 1 | 5 |
| 6. | Apply the Best First Search for the following graph and write down the success path. Use A as source node, F as the goal node and the numbers used against each node as heuristic data. | 2 | 2 | 2 | 5 |
| 7. | Write a note on use of Bidirectional Search and Non-chronological backtracking | 2 | 1 | 1 | 5 |

**Staff Incharge Module Coordinator IQAC members**

**Prof. U. M. Kulkarni Prof. S.R.Dhotre**

**Prof. Kavita D. H.**

**Prof. Gajendra C. Deshpande**