RAMAIAH UNIVERSITY OF APPLIED SCIENCES

Faculty of Engineering and Technology
Term-Test 1 Question Paper – B.Tech

Department : **Computer Science and Engineering**
Programme : **B.Tech (CSE)**
Semester / Batch : **7/2017, 2016**
Date of Test : **18/11/2020**
Course Code : **CSC401A**
Course Title : **Computational Intelligence**

Term Test - 1

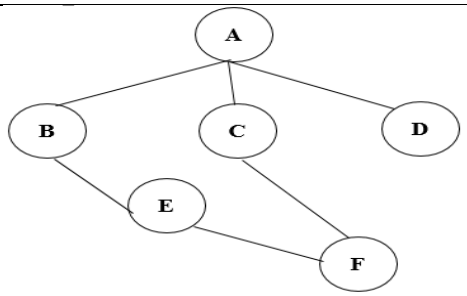
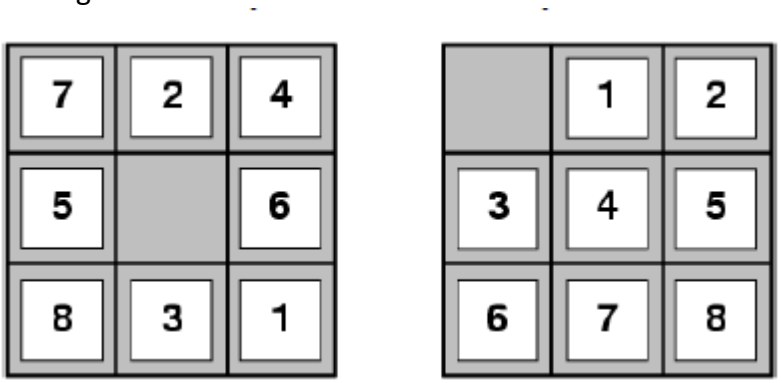
INSTRUCTIONS TO STUDENTS:

1. Answer all the questions
2. Use only SI units
3. Use of non-programmable scientific calculator is permitted
4. Use of data handbook permitted wherever applicable
5. Missing data may be appropriately assumed
6. Notations used have usual meaning
7. **Mail the scanned answer sheets in pdf format within the stipulated time to sagar.cs.et@msruas.ac.in**

Maximum Duration: 1:15 Hour **Maximum Marks: 25**

IMPORTANT:
You may retain the question paper for future reference

Q. No.	Question	Marks	CO
1	a. Define Artificial Intelligence and explain the features	3	1
	b. List the dominant applications of Artificial Intelligence (AI)	2	1
2	a. Classify intelligent agents in AI	3	2
	b. Explain different tasks in AI	2	2
3	a. Apply the Breadth First search and Depth First Search techniques for the traversal of the graph given in Figure 1. Consider **A** as the source node and illustrate the visited nodes and the path in each iteration.	3	3

	 Figure 1		
	a) Build a state space tree for the different steps to reach goal state in 8 puzzle. The initial and the final states are as given in Figure 2.  Figure 2	**2**	**3**
4	a. Analyze the Performance, Environment, Actuator, and Sensors (PEAS) for the following agent types: 1) Medical diagnosis system 2) Self driving cars	**5**	**4**
5	a. A network administrator needs to design an algorithm for a local area network in such a way that a packet that follows the route between a source and a destination travels the shortest path. Design the network as a graph and propose the most suitable algorithm to address the challenge and Justify that the recommended algorithm is the best fit to the challenge.	**5**	**4**

CO: Course Outcomes