MIT-WPU | Dr. Vishwanath Karad MIT WORLD PEACE UNIVERSITY | PUNE

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End Semester Examination

May-June 2023

CET2001B - Advanced Data Structures

Schedule ID: 18126

Faculty/School	Faculty of Engineering & Technology	**Term**	IV
Program	Second Year B. Tech	**Duration**	**1 Hours 30 Minutes**
Specialization		**Max. Marks**	**40**

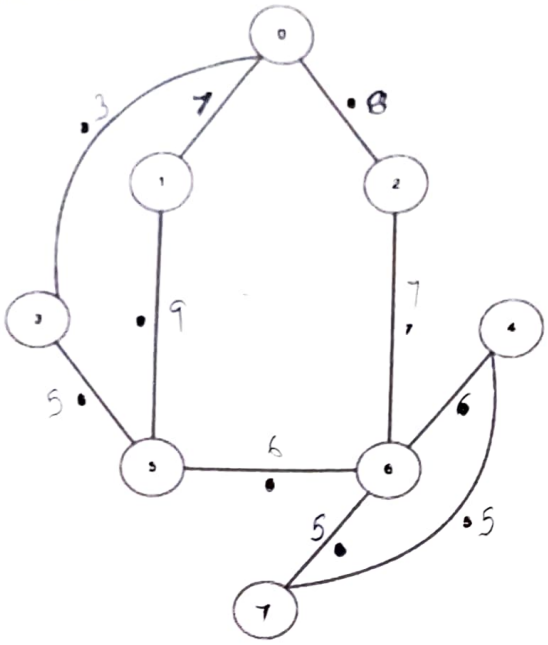
Read the instructions provided for every question properly before attempting the answer.

Section - 1 : contain(s) **10** question(s) and each question carries **5** mark(s).You can answer any **8** questions out of **10.**

Click **Finish** only after completion of the Exam.

Section - 1 (8 X 5 Marks)
Answer any 8 questions

1	What is hashing? Explain the different methods of collision resolution with examples.	**5 marks**	CO4	Understanding
2	Write a pseudocode for deletion of node having 2 children in binary search tree.	**5 marks**	CO1	Understanding
3	Explain with *suitable* example, DFS and BFS traversal of a graph. Show Data *Structure* used in each traversal step by step.	**5 marks**	CO1	Understanding
4	*Write* pseudo code for recursive DFS traversal of a graph.	**5 marks**	CO1	Understanding

5	Find the shortest path from source vertex 0 using Dijkstra's Algorithm. Show each step.  	**5 marks**	CO1, CO3	Applying
6	What are the characteristics of red-black trees?	**5 marks**	CO2	Understanding
7	Construct Max heap by inserting the below numbers in the given order. 17, 19, 3, 9, 11, 22, 25, 23 and delete the element 23. Show each step.	**5 marks**	CO1	Applying
8	Construct the AVL tree for the following data by inserting each of the following data item one at a time. Show each step. 30.31,32,23,22,28,24,29,26.	**5 marks**	CO2	Applying
9	Describe Indexed sequential file organization in detail. Also state its advantages and disadvantages.	**5 marks**	CO4	Understanding
10	Create a B Tree of order 4 from below keys. Apply left bias method. A,Z,S,E,T,Y,Q,S,P,O,E,W	**5 marks**	CO2	Applying

END OF QUESTION PAPER