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PAPER CODE	U223-232(End)
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MAY 2023 (ENDSEM) EXAM**S.Y. B.TECH (COMPUTER ENGINEERING)****(AY 2022-23 SEMESTER - II)****COURSE NAME: ADVANCED DATA STRUCTURE****COURSE CODE: CSUA22202****(PATTERN 2020)**

Time: [1Hr]

[Max. Marks: 30]

Instructions to candidates:

- 1) Use of scientific calculator is allowed
- 2) Use suitable data where ever required
- 3) All questions are compulsory

Ques tion No.	Question Description	Max. Mark s	CO mappe d	BT Level
Q.1	a) Illustrate how does the concept of heapify help in building a Min or Max Heap?	[4]	[4]	[Understand]
	b) Build and explain Min Heap Tree of following Array {5, 3, 8, 4, 2, 1, 7} and write pseudo code for it?	[6]	[4]	[Apply]
	OR			
	c) Using the hash function 'key mod 7' insert the sequence of keys in the hash table. 50, 700, 76, 86, 92, 73, 101. Use linear probing technique for collision resolution.	[6]	[4]	[Apply]
Q.2	a) Distinguish between text files and binary files in Java?	[4]	[5]	[Understand]
	b) Use buffered classes for inputting & outputting text in a file. Demonstrate it with appropriate java code?	[6]	[5]	[Apply]
	OR			
	c) Show using code-snippets, how File Class is used to (i) create a new file and print its length if it already exists and compare a byte stream and a character stream?	[6]	[5]	[Apply]
Q.3	a) Write a pseudo code for evaluating an arithmetic expression using an expression tree in Java?	[4]	[6]	[Apply]
	b) Elaborate tri tree with suitable example and explain how it is used for autocomplete application?	[6]	[6]	[Apply]
	OR			
	c) State the data structure to find the friends in social network and discuss the suitable algorithms with it's time complexity.	[6]	[6]	[Apply]