Reg. No:

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)
B.Tech II Year I Semester Supplementary Examinations Feb-2021
ADVANCED DATA STRUCTURES THROUGH C++
(Common to CSE & CSIT)

Time: 3 hours   Max. Marks: 60

(Answer all Five Units 5 x 12 = 60 Marks)

UNIT-I

1	a	What is default constructor? How do you call it?	6M
	b	Explain how constructors are overloaded?	6M

OR

2	a	What is the purpose of "friend" function?	6M
	b	Explain static variables with the help of c++ code	6M

UNIT-II

3	a	What is abstract class? Define the rules to create an abstract class with example.	6M
	b	What is code reusability? Explain it with "multi level inheritance"	6M

OR

4	What is generic type? Narrate function templates in detail.	12M

UNIT-III

5	a	Write properties of binary trees.	6M
	b	Write pseudocode to delete an element from binary tree.	6M

OR

6	Illustrate BFS and DFS Traversing techniques on graph with pseudocodes.	12 M

UNIT-IV

7	a	Explain Binomial Heaps with an example	6M
	b	Explain Fibonacci Heaps with an example	6M

OR

8	What is the use of hash function? Narrate about any 3 in detail	12 M

UNIT-V

9	a	write about B+ trees.	6M
	b	Construct a red-black Tree by taking following numbers in their sequence. "4,65,12,2,44,67,11,20,3,9,15,55,30,40,"	6M

OR

10	Construct an AVL Tree by taking following numbers in their sequence. "4,65,12,2,44,67,11,20,3,9,15,55,30,40,"	12 M

*** END ***