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Question Paper Code: 55821

B.E. / B.Tech. DEGREE EXAMINATION, AUGUST 2021

Fifth Semester

Electronics and Instrumentation Engineering

15UIT521–PROGRAMMING WITH DATA STRUCTURES

(Regulation 2015)

Duration: 1:45 hour

Maximum: 50 Marks

PART A - (10 x 2 = 20 Marks)

(Answer any ten of the following questions)

1. List and define the two types of Polymorphism CO1 -R
2. Distinguish between Call by Value and Call by Reference. CO2- R
3. What are the operations of the stack? CO3- R
4. Discuss the three binary tree traversal algorithms with examples. CO4- Ana
5. What do you mean by internal and external sorting? CO5 -U
6. List and define the two types of Polymorphism CO1 -R
7. Distinguish between Call by Value and Call by Reference. CO2- R
8. What are the operations of the stack? CO3- R
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10. What do you mean by internal and external sorting? CO5 -U
11. Which one of the below mentioned is linear data structure?
12. Which of the following concepts of OOPS means exposing only necessary information to client?
13. What must be the ideal size of array if the height of tree is 'n'?
14. The complexity of Bubble sort algorithm is

15 Which one of the below mentioned is linear data structure?

PART – B (3 x 10= 30 Marks)

(Answer any three of the following questions)

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| 11. What is constructor? Explain the types of constructor with an example. | CO1 -U | (10) |
| 12. Explain multiple catch statement with help of suitable C++ coding | CO2 -U | (10) |
| 13. Explain the Queue Model and list out its Applications. | CO3- U | (10) |
| 14. Draw a binary search tree for the following list
60, 25, 75, 75, 50, 66, 33, 44. Trace the algorithm to delete the
nodes 25, 75, 44 from the tree | CO4 -U | (10) |
| 15. Explain in detail about all pair shortest path problem with example. | CO5- U | (10) |