Reg. No. : | | | | | | | | | | |

Question Paper Code: 53827

B.E. / B.Tech. DEGREE EXAMINATION, DEC 2020

Third Semester

Biomedical Engineering

15UIT327-OBJECT ORIENTED PROGRAMMING AND DATA STRUCTURES

(Regulation 2015)

Duration: 1.15 hrs Maximum: 30 Marks

PART A - (6 x 1 = 6 Marks)

(Answer any six of the following questions)

1. In C++, the default access specifier in class is _____. CO1- U

   (a) Public (b) Protected (c) Private (d) Friendly

2. Which of the following is not a jump statement in C++? CO1-R

   (a) break (b) goto (c) exit (d) switch

3. What happens when we try to compile the in following code snippet? CO2 Ana

```
class Birds {};
class Peacock : protected Birds {};
```

   (a) It will not compile because a class cannot be protectedly inherited from other class..

   (b) It will not compile because class body of Peacock is not defined

   (c) It will not compile because class body of Birds is not defined

   (d) It will compile successfully

4. The _____ mode tells C++ to open a file for input CO2- R

   (a) add::ios (b) in::file (c) ios::app (d) ios::in

5. What is the time complexity to insert a node based on key in a priority queue? CO3- U

   (a) $O(n^2)$ (b) O(n) (c) O(logn) (d)O(nlogn)

6. A pointer variable which contains the location at the top element of the stack is called CO3- R

   (a) Top (b) Last (c) Final (d) End

7. What is/are the disadvantages of implementing tree using normal arrays? CO4-U

(a) difficulty in knowing children nodes of a node

(b) difficult in finding the parent of a node

(c) have to know the maximum number of nodes possible before creation of trees

(d) difficult to implement

8. What are the balance factors in AVL trees? CO4- R

(a) 1,-1,0 (b) -2,-1,0 (c) 1,2,3 (d) 2,-1,1

9. What is the speciality about the in order traversal of a binary search tree? CO5- U

(a) It traverses in an increasing order (b) It traverses in a non increasing order

(c) It traverses in a random fashion (d) It traverses based on priority of the node

10. _____ sorting algorithm is frequently used when n is small where n is total number of elements? CO5- R

(a) Heap (b) Insertion

(c) Bubble (d) Quick

PART – B (3 x 8= 24 Marks)

(Answer any three of the following questions)

11. Define token in C++. Explain its various types with examples. CO1- U (8)

12. Define inheritance. Explain the various types of inheritance with example programs. CO2-U (8)

13. How will you analyze an algorithm? Explain CO3-U (8)

14. Construct the binary tree for the following. CO4-U (8)
In order : 3 5 6 8 12 15 18 19 Preorder: 12 5 3 6 8 18 15 19

15. Explain the following collision resolution strategies with example. CO5- U (8)

(i) Separate Chaining