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

Question Paper Code: 98623

B.E./B.Tech. DEGREE EXAMINATION, MAY 2022

Sixth Semester

Information technology

19UIT623- OBJECT ORIENTED PROGRAMMING & DATA STRUCTURES

(Regulations 2019)

Duration: Three hours Maximum: 100 Marks

Answer All Questions

PART A - (10x 2 = 20 Marks)

1.	List the concepts of OOPs.	CO1- U
2.	Differentiate Identifiers and Keywords with an example	CO3- Ana
3.	Define Data Structure with its types.	CO1- U
4.	Summarize the concept of arrays in C++.	CO1- U
5.	Define the term tree traversal and mention the type of traversals?	CO1- U
6.	Define how the graphs can be represented in the datastructures.	CO1- U
7.	What is the purpose of using virtual functions?	CO1- U
8.	Write an algorithm to find whether the number is even or odd using if else statement.	CO2- App
9.	Name the algorithm used to find the shortest path in a graph.	CO3- U
10.	How you define a minimum spanning tree?	CO3- U

PART – B (5 x 16= 80Marks)

11.	(a)	Describe in detail about the types of expressions with an example	CO1-U	(16)
		Or		
	(b)	Explain the control structures used in C++ with an example	CO1-U	(16)
12.	(a)	Explain in detail about the array implementation of stacks with a proper example	CO1-U	(16)
		Or		
	(b)	Explain in detail about the array implementation of queues with an example	CO1-U	(16)

13. (a) Differentiate the methodologies used in BFS and DFS with an example CO1-U (16)

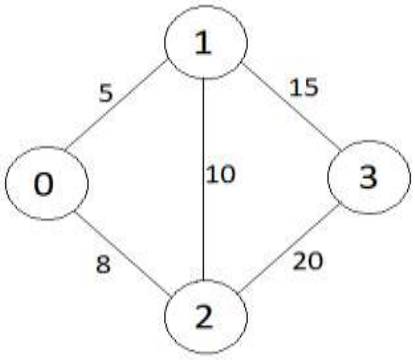
Or

(b) Differentiate the functionalities of Binary trees and AVL trees with an example CO1-U (16)

14. (a) Construct a binary search tree for the given list of number 8,18,25,11,14,4,18,31,45,22,35,49 CO2-App (16)

Or

(b) Apply Kruskals algorithm for the given weighted graph and find the cost of the graph CO2-App (16)



15. (a) Write a C++ program to implement Stack ADT. CO2- App (16)

Or

(b) Write a C++ program to implement Queue ADT. CO2- App (16)