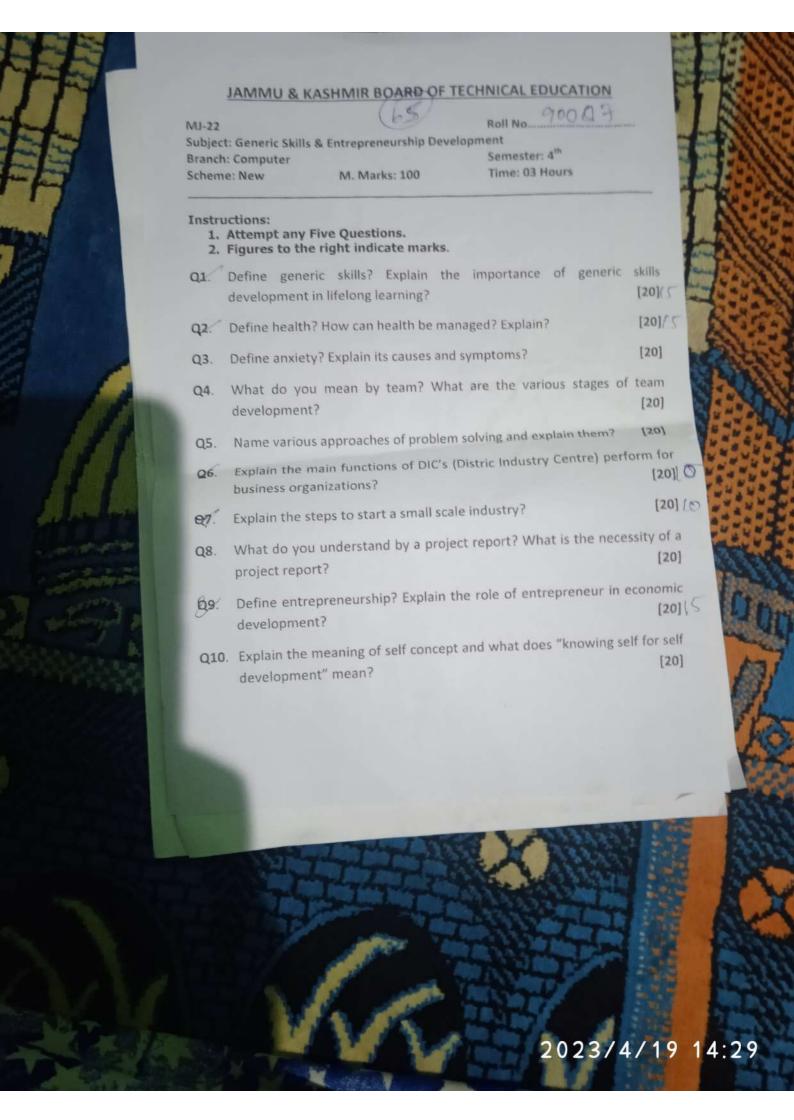
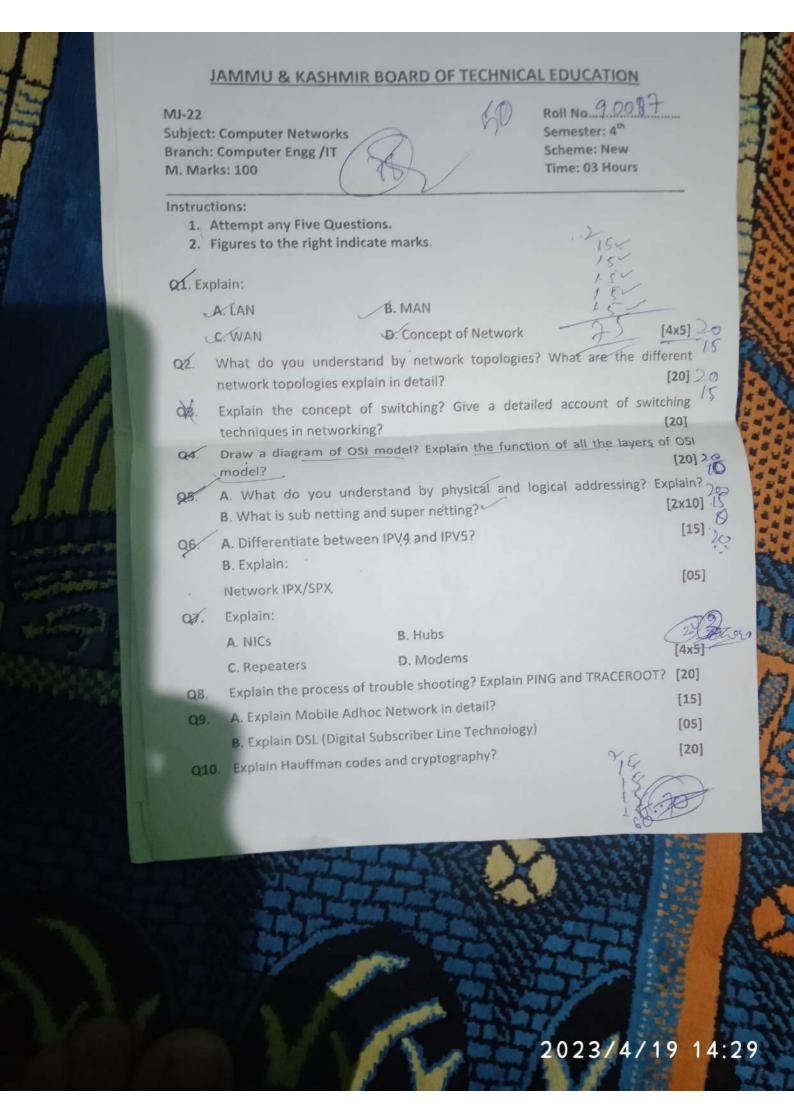


## JAMMU & KASHMIR BOARD OF TECHNICAL EDUCATION Roll No. Semester: 4th Subject: Data Structures Using C Scheme: New Time: 03 Hours Branch: Computer Engg / IT M. Marks: 100 Instructions: 1. Attempt any Five Questions. 2. Figures to the right indicate marks. A. Explain the difference between top down and bottom up design with the [2x10] J Q1 help of a suitable example? B. What do you understand by structured programming? B. Two dimensional array Q2. Explain: to A. Single dimensional array [4x5] D. Pointer variable What are the operations that can be performed on array? Explain with the C. Multi dimensional array What is a linked list? What are the types of linked list? Explain doubly linked Q3. A. What is a stack? What are the various applications of the stack? list with the help of a suitable example? Q4. [2x10] (o B. Explain Queue, Circular queue, De-queue? What do you understand by recursion? Explain recursion with the help of a 05. A. Explain the differences between a binary tree and a binary search tree? 06. program in C? [2x10] B. Explain In-Order traversal with the help of an example? What do you understand searching in data structure? Explain linear search in Q7. Q8. Explain the difference between bubble sort and Quick sort? Q10. A. What are the various applications of linked list? [2x10] B. Explain Merge Sort?





## JAMMU & KASHMIR BOARD OF TECHNICAL EDUCATION Roll No. 9008 7 MJ-22 Semester: 4th Subject: Object Oriented Prog. Using C++ Scheme: New Branch: Computer Engg ITT Time: 03 Hours M. Marks: 100 Instructions: 1. Attempt any Five Questions. 2. Figures to the right indicate marks. Explain: B. Inheritance A. Encapsulation [4x5] / D. Data Hiding C. Polymorphism A. What is the difference between Procedure oriented programming & Object QZ. oriented programming? B. Explain: [2x10] II. Dynamic Binding 1. Class What are the various data types in C++? Explain increment and decrement [20] Q3. operators in detail? What do you understand by loops? Differentiate between while loop and do-94. [20] while loop using a program? What do you understand by a constructor and a destructor? Explain with the help of a program? Explain: Q6. B. Friend function A. Inline function D. Constant member function [4x5] C. Static functions What do you understand by operator overloading? Also explain constructor Q7. [20] overloading? Explain: Q8. B. Private Data A. Protected data [4x5] D. Virtual Function C. Public Data What is inheritance? Explain multiple and multi level inheritance in detail? [20] 09 Q10. Explain with examples: [2x10] B. Switch-Case A. Pre-Processor directives

