

Roll Number: \_\_\_\_\_

**Thapar University, Patiala**  
Department of Computer Science and Engineering

**E2D EXAMINATION**

B. E. (1st Year):

Course Code: UTA007

Course Name: Computer Programming - I

September 5, 2017

Time: 3 Hours, M. Marks: 100

Name Of Faculty: HAR

Note: Attempt all the parts of questions together.

Q.1(a)	Differentiate between the following with suitable examples: i. Structures and Classes ii. Function overloading and function overriding iii. Public, private and Protected access specifiers iv. Selection statement and Iteration Statement	(4*5 =20)
Q.1(b)	Write a C++ program that adds two 4 x 4 matrices.	(10)
Q.2(a)	Explain the concept of Inheritance and its types with diagrammatic representation of all types. Write an appropriate code snippet for multiple inheritance.	(5+5 =10)
Q.2(b)	Write a C++ class that includes member functions: to read time in seconds, convert in time format (HH:MM:SS) and prints the time in (HH:MM:SS) format.	(10)
Q.3	Illustrate the need of Friend Function in C++. Justify your answer with example that demonstrates the use of Friend Function.	(10)
Q.4(a)	Describe briefly the various storage classes in C++.	(10)
Q.4(b)	Write a C++ program using the concept of File Handling, that reads and copies the contents of file "File1.txt" and writes it in the file "File2.txt".	(10)
Q.5	Write short notes on with code examples: i. Copy Constructor ii. Destructor iii. Recursion iv. Standard streams in Files I/O	(4*5 =20)

Note: The evaluated answer sheets will be shown on 8<sup>th</sup> September 2017 at 10:15 am in my cabin (Chamber No. 216 in Faculty chambers of CSED)