(b) Write a program in C++ that illustrates the application of re-throwing an exception.

9. Write notes on (any *two*) :

(a) Templates and inheritance

(b) File Mode parameters

(c) Updating a sequential access file

Roll No. ....

123A
02

24164

B. Tech. (CSE) 4th Semester (Re-appear) Examination – October, 2020

OBJECT ORIENTED PROGRAMMING USING C++

Paper : IT-202-F

Time : 1.45 Hours] *[Maximum Marks : 100*

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt any *three* questions. All questions carry equal marks.

1. (a) Is inheritance important to C++ ? Explain why ?

(b) Why bother making an abstract data type ? Why not just make it non-abstract and avoid creating any objects of that types ?

(c) How big is a class object ?

(d) What is the difference between class declaration and class definition ?

(e) How can an inline function help with the tradeoff of safety vs. speed ?

(f) Why Inline functions are mostly used instead of plain old #define macros ?

(g) Write a short note on Type Casting in C++.

(h) Briefly explain the class functions that enables the opening a file in read and write mode.

(i) What is the syntax of class template ? Explain with example.

(j) Explain any two member functions of istream class briefly.

2. (a) Write the difference between :

(i) Data abstraction and Data encapsulation.

(ii) Structural Programming and Object oriented Programming.

(b) Write a note on class's behaviours.

3. (a) What are the main advantages of Object oriented Programming over Procedural oriented programmmg?

(b) What are header files and library files ? Why these are needed?

4. (a) Do friends violate encapsulation ? Justify your answer ?

(b) What do you mean by the dynamic initialization of objects ? Why do we need to do this ?

5. (a) What is the role of this pointer ? Explain with the help of example.

(b) Create a class time and write a program to add two times using C++.

6. (a) What is virtual destructor ? Write a program in C++ with virtual destructor.

(b) How we can achieve polymorphism at compile time and runtime ?

7. (a) What is the difference between composition and inheritance in C++ ? Is composition better than inheritance ?

(b) What is virtual function ? What are the features of virtual functions ?

8. (a) What is stack unwinding ? Explain with the help of exception program.