Roll No. .....

(01/22-II)

5235

B. A./B.Sc. EXAMINATION

(Fifth Semester)

COMPUTER SCIENCE

Paper I

Programming in C++

Time : Three Hours *Maxi. Marks :* {B.Sc. : 30 / B.A. : 20}

Note : Attempt *Five* questions in all, selecting *one* question from each Unit. Q. No. 1 is compulsory. All questions carry equal marks.

1. B.Sc. students attempt all the six parts in this question and B. A. students attempt any *four* parts. Each part carries 1 mark :

   (a) What are Objects ? How are they created ?

(b) What is Pure Virtual Function ?

(c) Describe the importance of destructors.

(d) What do you mean by virtual base class ?

(e) Distinguish between new and delete operator.

(f) How does object oriented programming differ from procedure oriented programming ?

Unit I

2. Explain the following terms and give examples of each : 4(6)

(a) Function overloading

(b) Static number functions.

3. What are the advantages of object oriented programming ? Explain its charcteristics with example. 4(6)

Unit II

4. What is a Constructor ? List some of the properties of the constructor functions. Explain in detail. 4(6)

5. What is the basic difference between manipulators and ios member functions in implementation ? Give examples. 4(6)

Unit III

6. How is polymorphism achieved at (a) Compile time and (b) Run time. 4(6)

7. What are the different forms of inheritance ? Give an example of each. 4(6)

Unit IV

8. (a) Write the different ways of handling exception.

   (b) What is generic programming ? How is it implemented in C++ ? 4(6)

9. (a) Explain the exception handling mechanism in C++.

(b) Write a program to multiply two complex numbers of any data type using template. 4(6)