11. (a) What is the need for template function in C++ ? What are their advantages ? 7

(b) What is the need for exception handling ? 6

**OR**

12. (a) When do we need multiple catch blocks for a single Try block ? Give an example. 7

(b) Explain the function Template. 6

**NTK/KW/15/7438**

**Faculty of Engineering and Technology**

**Fifth Semester B.E. (Computer Science Engg.) (C.B.S.) Examination**

**OBJECT ORIENTED PROGRAMMING**

Time : Three Hours]                                    [Maximum Marks : 80

**INSTRUCTIONS TO CANDIDATES**

(1) All questions carry marks as indicated.

(2) Solve **SIX** questions as follows :

Que. No. **1 OR** Que. No. **2**

Que. No. **3 OR** Que. No. **4**

Que. No. **5 OR** Que. No. **6**

Que. No. **7 OR** Que. No. **8**

Que. No. **9 OR** Que. No. **10**

Que. No. **11 OR** Que. No. **12**

(3) Due credit will be given to neatness and adequate dimensions.

(4) Illustrate the answers with necessary figures/drawings wherever necessary.

(5) Assume suitable data wherever necessary.

1.  (a)  Explain the basic concept of Object Oriented Programming.                                  8

    (b)  What is the difference between a local variable and a Data member ?                        6

**OR**

2.  (a)  Explain copy constructors with an example.    8

    (b)  Write a C++ program that :

        (i)  Calculates and prints the sum of the integers from 1 to 10.

        (ii)  To calculate x raised to the power y.    6

3.  (a)  What is operator overloading ? Explain with example.                                    7

    (b)  What are the difference between pointer to constant and constant to pointer ?            6

**OR**

4.  (a)  Explain the New and Delete operators in C++.                                            7

    (b)  Explain Pitfalls of operator overloading.    6

5.  (a)  Explain different types of Inheritances.    8

    (b)  Explain function overloading with an example.                                          6

**OR**

6.  (a)  Describe pure virtual function with an example.                                          8

    (b)  Write a C++ program using this pointer.    6

7.  (a)  What is Static function and Dynamic type information ?                                  7

    (b)  Explain Abstract class with an example.    6

**OR**

8.  (a)  What are the types of Polymorphism ?    7

    (b)  Explain the concept of containership with example.                                      6

9.  (a)  What are streams ? Why they are useful ?    7

    (b)  What is manipulator ? Differentiate between manipulator and lash functions.            6

**OR**

10. (a)  Explain about formatted and unformatted IO with suitable example.                        7

    (b)  Explain the role of :

        (i)  seekg ( )

        (ii)  seekp ( )

        (iii)  tellg ( )

        (iv)  tellp ( ) function in the process of Random access in binary file.                6