



DF-1725

**M. Sc. I. T. & ICT (Programme) (Sem. III) Examination**  
**March / April – 2016**  
**Object Oriented Programming**

Time : 3 Hours]

[Total Marks : 70

**Instruction :**

नीचे दर्शायेव निशानीवाणी विगतो उत्तरवडी पर अवश्य कपनी. Fillup strictly the details of signs on your answer book.	Seat No. :
Name of the Examination :	<input type="text"/>
<input type="text" value="B. SC. I. T. (SEM. III)"/>	<input type="text"/>
Name of the Subject :	<input type="text"/>
<input type="text" value="OBJECT ORIENTED PROGRAMMING"/>	<input type="text"/>
Subject Code No. : <input type="text" value="1"/> <input type="text" value="7"/> <input type="text" value="2"/> <input type="text" value="5"/>	<input type="text" value="Student's Signature"/>
Section No. (1, 2,.....): <input type="text" value="Nil"/>	

**1 Answer the following. (Any THREE) [18]**

- 1 Difference between POP and OOP.
- 2 List and explain different varieties of functions you can define in C++.
- 3 State and explain the most appropriate way to initialize and clean up objects in C++ with example.
- 4 Write a note on input stream and output stream with example of overloading insertion and extraction operator for 'matrix' class.

**2 Answer the following. (Any THREE) [18]**

- 1 Explain references in C++. Explain functions with arguments passed by value and reference with example.
- 2 Write a note on different type conversions for user defined data types with appropriate example.
- 3 Justify the use of friend function in operator overloading with an appropriate example.
- 4 Explain use of runtime polymorphism with example.

**3 Answer the following. (Any TWO) [18]**

- 1 Write a C++ program that takes input of 10 products objects and sort them according to their price.
- 2 Develop 'string' class with given functionalities:
  - length
  - Reversing the string
  - Palindrome or not
  - Overload + operator
  - Overload \* operator ("abc" \* 3 will print o/p : abcabcabc )

3 Develop required classes to implement data, time and datetime with functionality to display them in different formats. (At least two formats for each class)

4 **Do as directed. (Any FOUR)** **[16]**

- 1 Which exceptional conditions may arise in a program? How to handle them? Explain with example.
- 2 Write a C++ program to count number of sentences in a file.
- 3 Explain setw and endl with example.
- 4 Write a note on templates with example.
- 5 Differentiate virtual function and pure virtual function.

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