

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

**M.Sc.(IT) (2016 to 2018) (Sem.-1)**  
**OBJECT ORIENTED PROGRAMMING IN C++**  
Subject Code : MSIT-102  
M.Code : 72518

Time : 3 Hrs.

Max. Marks : 60

**INSTRUCTION TO CANDIDATES :**

1. SECTIONS-A, B, C & D contains TWO questions each carrying TEN marks each and students have to attempt any ONE question from each SECTION.
2. SECTION-E is COMPULSORY consisting of TEN questions carrying TWENTY marks in all.

**SECTION-A**

1. What is functional programming? How it is different from object oriented programming? Discuss various advantages and disadvantages of object oriented programming languages.
2. Explain the following :
  - a) Type conversion
  - b) Features of `iostream.h` and `iomanip.h` header files

**SECTION-B**

3. What is recursion? What are its merits and demerits? Write a C++ program to print Fibonacci series using recursion.
4. Write and explain a C++ program to demonstrate the concept of passing array as argument to function.

**SECTION-C**

5. What are inline and friend functions? Explain with examples.
6. Write notes on the following :
  - a) Need of dynamic memory allocation
  - b) Public and private inheritance

## SECTION-D

7. What is unary and binary operator overloading? Write and explain C++ programs to support your answer.
8. What is use of virtual destructor and pure virtual function? Explain with examples.

## SECTION-E

9. Write briefly :

- a) Define object and class.
- b) What is use of enumeration?
- c) Differentiate structure and union.
- d) List various merits of pointer.
- e) What are merits and demerits of using function?
- f) What is fstream?
- g) Define file. What are its different types?
- h) Write C++ functions used to open and close a file.
- i) List various properties of constructor.
- j) Write the significance of scope resolution operator.

**NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.**