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GSM / M-18

(17) COMPUTER SCIENCE

Paper–I

Object Oriened Programming with C++

*Time allowed : 3 hours]* [*Maximum marks : B.Sc. : 40*

*Note :* **Question No. 1 is compulsory. Attempt five questions in** **all, selecting one question from each unit. All questions** **carry equal marks.**

1. Compulsory Question :

   (i) Define Class

   (ii) What do you mean by object of a class ?

   (iii) What are manipulators ?

   (iv) What is array ?

   (v) Define polymorphism.

   (vi) What is the use of pointer variable ?

   (vii) What is the use of new operator ?

   (viii) What do you mean by modular approach in programming ?

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(2)

**Unit–I**

2. Explain the following concepts of C++ with the help of suitable examples :

   (i) Encapsulation

   (ii) Data Members and member functions

   (iii) Local class

   (iv) Structures

3. What is the difference between procedure oriented programming and object oriented programming ? What are the benefits of using object oriented paradigm to programming ?

**Unit–II**

4. What do you mean by constructor ? Explain the concept of parameterized constructors and copy constructors with suitable example.

5. What do you mean by unformatted and formatted output ? Explain different functions used for formatting the output.

**Unit–III**

6. What do you mean by call by reference ? Write a program to swap two numbers using function with the help of call by reference.

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7. Write short note on the following by giving suitable example :

(i) Pointer

(ii) Friend class

## Unit–IV

8. What is function overloading ? Write a program to overload a function.

9. (i) What are the advantages of using inline function ? What are the conditions of making a function inline ?

(ii) What do you mean by static polymorphism ?