

B.E. Computer Science & Engineering (Model Curriculum) Semester-IV  
**SE204CS - Object Oriented Programming**

P. Pages : 2

Time : Three Hours



**GUG/W/23/13809**

Max. Marks : 80

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- Notes :
1. All questions are compulsory.
  2. Assume suitable data wherever necessary.
  3. All questions carry equal marks.

1. a) Write a program to demonstrate the use of logical AND, OR, NOT operator. 8  
b) Explain by giving syntax with suitable example. 8
  - i) “for” loop.
  - ii) “while” loop.
  - iii) “do-while” loop

**OR**

2. a) Explain new and delete operators along with suitable lines of code. 8  
b) Write a C++ program to check whether entered number is armstrong or not. 8
3. a) Write a C++ program to calculate simple interest using class and objects? 8  
b) Explain classes and objects in details with suitable example. 8

**OR**

4. a) What is friend function? What are the uses of friend function? Explain with example. 8  
b) Explain Memory allocation for objects with suitable example? 8
5. a) Explain virtual base class along with suitable lines of code. 8  
b) What is inheritance and its types? Write advantage and disadvantage of inheritance. 8

**OR**

6. a) Implement operator –( ) using the concept of unary operator overloading. 8  
b) Explain the concept of constructor in derived class with suitable program code. 8
7. a) Write a program using the concept of array of pointers that adds only the even numbers of the array. 8

b) Explain pure virtual functions with suitable program code. **8**

**OR**

**8.** a) Write a C++ program to demonstrate the use of pointers to derived objects. **8**

b) What is abstract class? Explain with example. **8**

**9.** a) What is Template? Explain function template with example. **8**

b) Explain the following with suitable program code **8**  
seekg( ), seekp( ), tellg(), tellp( )

**OR**

**10.** a) Write a program that creates an array of 10 elements and stores the even numbers in 'Even file' and odd numbers in 'odd file'. **8**

b) Write a program to copy the content of one file into another file by using file structure. **8**

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