B.Tech. / B.E. Computer Science & Engineering (Model Curriculum) Semester-IV

SE204CS - Paper-III - Object Oriented Programming

P. Pages : 2 **GUG/W/24/13809**

Time : Three Hours * 5 4 6 5 * Max. Marks : 80

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

1. a) Explain polymorphism in C++. **8**

b) State operators in C++ and explain logical and arithmetic operators in detail. **8**

OR

2. a) What are local and global variables in C++ and explain their scope through a program. **8**

b) Explain the following loops with an example: **8**
-while loop
-do while loop

3. a) What is function? State and explain need of function. Write a code to check whether a number is palindrome or not using function in C++. **8**

b) Explain the concept of function overloading with the help of an example in C++. **8**

OR

4. a) Explain the concept of passing class objects as function arguments with the help of an example. **8**

b) What are classes and explain need of classes in C++. Create a class rectangle having data members len and breadth. Use appropriate member function to calculate area of rectangle. **8**

5. a) How is dynamic initialization of objects achieved in C++. **8**

b) Explain the following terms with example: **8**
-const variables.
-const objects.
-const member variable.
-const member function.

OR

6. a) What are constructors? Explain overloading of constructor through a program in detail. **8**

b) Explain the concept of multilevel inheritance with the help of an example. **8**

7. a) What is "this" pointer in C++? Explain it with the help of an example. **8**

b) How do we achieve run time polymorphism in C++? Show with a program code. **8**

OR

8. a) What are pointers? Explain arithmetic pointers in C++ with an example. **8**

b) Explain the concepts of Pointers to objects with an example. **8**

9. a) Explain the following functions with example: **8**
-put () and get () function.
-getline () and putline () function.

b) Explain classes for file stream operations in C++ with a diagram. **8**

OR

10. a) Explain templates and its type in detail through example. **8**

b) Explain the following: **8**
-seekg ()
-seekp ()
-tellg ()
-tellp ()

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