PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2022
(Second Semester)

Branch – SOFTWARE SYSTEMS (Five year Integrated)

OBJECT ORIENTED PROGRAMMING USING C++

Time: Three Hours   Maximum: 50 Marks

SECTION-A (5 Marks)
Answer ALL questions
ALL questions carry EQUAL marks   (5 x 1 = 5)

1   Evaluate the m%n++ expression, assuming m=24 and n=7.
   a.4   b.3   c.2   d.5

2   If a non-member function have to access to the private members of a class, the class must declare that function as _____.
   a. Friend   b. Inline   c. Static   d. Virtual

3   How many types of constructors are available for use in general (with respect to parameters)?
   a. 3   b. 4   c. 5   d. 2

4   The ability to reuse objects already defined, perhaps for a different purpose, with modification appropriate to the new purpose, is referred to as
   a. Information hiding   b. Inheritance
   c. Polymorphism   d. Overloading

5. A template class can have _____.
   a. Only one generic data type
   b. At most two data types
   c. More than one generic data type
   d. Only generic type of integers and not characters

SECTION - B (15 Marks)
Answer ALL Questions
ALL Questions Carry EQUAL Marks   (5 x 3 = 15)

6. a. Describe the five key characteristics of the Object-Oriented paradigm.
(OR)
b. Enumerate the different types of control structures in C++ with suitable examples.

7. a. List the benefits and limitations of inline function.
(OR)
b. Evaluate the implementation of the Static member function.

8. a. Explain the advantage of using a copy constructor with an example.
(OR)
b. Illustrate Binary operator Overloading with an example.

9. a. Compare multilevel and multiple inheritances.

(OR)

b. Discuss the benefits of dynamic binding.

10. a. Analyse the advantage of using the exception handling model in C++.

(OR)

b. Differentiate String I/O from Character I/O functions.

SECTION -C (30 Marks)
Answer ALL questions
ALL questions carry EQUAL Marks   (5 x 6 = 30)

11. a. List the benefits and applications of the Object-Oriented Paradigm.

(OR)

b. Discuss the different types of operators in C++.

12. a. Compare and contrast Call by Value and Call by Reference with an example.

(OR)

b. Write a program to add two complex numbers using the object as an argument.

13. a. Evaluate the implementation of parameterised constructors and multiple constructors in a class.

(OR)

b. Create a C++ program to calculate the sum of marks and display the results using the friend function.

14. a. Enumerate the structure of Hybrid Inheritance with an example.

(OR)

b. Differentiate compile time polymorphism and run time polymorphism with suitable examples.

15. a. Differentiate between Generic Functions and Generic Classes with suitable examples.

(OR)

b. Explain the usage of file pointers in C++.

Z-Z-Z   END