PART – A

Answer all questions. Each question carries 4 marks.

1. List the special features of object oriented programming.
2. What is scope resolution operator?
3. What is a reference variable? What are its uses?
4. Write any four special properties of constructor.
5. Write some situations where inline expansion may not work.
6. Discuss static members with an example.
7. List out the operators that cannot be overloaded using friend function.
8. What is a pure virtual function?
9. Write a short note on Microsoft foundation classes.
10. How do you represent classes and attributes using UML?

(10 \times 4 = 40 \text{ Marks})
PART – B

Answer any one full questions from each Module. Each full question carries 20 marks.

Module – I

11. (a) Compare the use of reference and pointers in various contexts.
(b) Write a short note on default function arguments.

OR

12. (a) Explain the design of an object oriented system.
(b) Illustrate the various function call mechanisms with suitable examples.

Module – II

13. (a) With suitable example explain private member functions.
(b) Explain about copy constructor with an example.

OR

14. (a) Illustrate with example how to define a member function outside the class definition.
(b) Explain dynamic memory allocation with example.

Module – III

15. (a) Discuss the difference between virtual function and pure virtual function.
(b) Explain operator overloading with suitable examples.

OR

16. (a) Define polymorphism. Explain the different types of polymorphism.
(b) Explain multiple inheritance with an example.

(3 × 20 = 60 Marks)