



**Avinashilingam Institute for Home Science and Higher Education for Women**  
(Deemed to be University under Category 'A' by MHRD, Estd. u/s 3 of UGC Act 1956)  
Re-accredited with 'A+' Grade by NAAC. Recognised by UGC Under Section 12B  
Coimbatore - 641 043, Tamil Nadu, India

**Bachelor's Degree Supplementary Examination –June/July 2021**  
**II Semester**

**Class : 2018 Batch**  
**Major : Information Technology**

**Time: 3 hours**  
**Max. Marks: 100**

**18BITC06 – Object Oriented Programming with C++**

**Course Outcomes:**

- CO1:** Describe and usage of basic programming elements, functions and file handling in C++  
**CO2:** Articulate the Object oriented programming concepts and apply it in C++ programming language.  
**CO3:** Collaborate the characteristics of an object-oriented programming language: data abstraction, information hiding, inheritance, and dynamic binding of the messages to the methods in C++ programs.  
**CO4:** Demonstrate using pointers and memory management in C++.  
**CO5:** Infer the File Management in C++.

**Part A**

**10x 1 = 10**

**Choose the correct answer**

1. What will be output of the following C++ coding? CO1K6

```
int main()
{
    int i=0,x=0;
    for(i=1;i<10;i*=2)
    {
        x++;
        count<<x;
    }
    cout<<x;
    return 0;
}
```

- a. 12344                      b. 12345678910                      c. 123455                      d. 1234567899
2. Code reusability can be achieved by the following features of OOPS CO1K1  
a. Encapsulation                      b. Inheritance                      c. Abstraction                      d. Polymorphism
3. Which of the following is a right way to declare a static member variable? CO2K1  
a. stat int a;                      b. static a;                      c. static int a;                      d. both (a) and (c)
4. The objects of an array can be denoted by \_\_\_\_\_ CO2K1  
a. Name                      b. Random numbers                      c. Alphabets                      d. Indices
5. Which of the following operator cannot be overloaded CO3K1  
a. &                      b. .                      c. +                      d. --
6. Where does the abstract class is used? CO3K2  
a. Base class only                      b. Derived class                      c. Virtual class                      d. Both derived and base class
7. The size of void pointer is \_\_\_\_\_ CO4K1  
a. 0 bytes                      b. 2 bytes                      c. 4 bytes                      d. Not fixed
8. A void pointer cannot point to which of these? CO4K2  
a. C++ methods                      b. C++ class members                      c. Both a & b                      d. None of these
9. Which of the following stream performs both input and output operations? CO5K2  
a. iostream                      b. ifstream                      c. ofstream                      d. fstream
10. Which of the following is not used to seek file pointer? CO5K1  
a. ios::set                      b. ios::end                      c. ios::cur                      d. ios::beg

**Part-B**  
**Answer all the questions**  
**Each answer should not exceed 400 words or one page**

**5X6= 30**

- 11 (a) Illustrate the purpose of inline functions using appropriate example. CO1K4  
(or)  
11 (b) Compare while loop and do-while loop in C++ with suitable examples. CO1K4
- 12 (a) Illustrate about the concept of friend functions in C++. CO2K4  
(or)  
12 (b) Explain how to define C++ member functions. CO2K3
- 13 (a) Illustrate type conversion in C++ with suitable example. CO3K4  
(or)  
13 (b) Explain in detail about virtual base class in C++. CO3K2
- 14 (a) Demonstrate the usage of 'this' pointer. CO4K5  
(or)  
14 (b) Explain the concept of Pure Virtual Functions. CO4K4
15. (a) Construct a program to open a file in read and write mode. CO5K6  
(or)  
15. (b) Describe about various file modes in C++. CO5K2

**Part C**  
**Answer ALL questions**  
**Each answer should not exceed 800 words or four pages**

**5 x 12 = 60**

16. (a) Describe C++ functions. Explain the concept of Function Overloading in C++. CO1K2  
(or)  
16. (b) Define Switch case statement in C++. Write the syntax and explain its workflow. CO1K6  
Construct a C++ program using Switch-Case and explain how the program executes.
17. (a) Define Class and Objects. Illustrate how class works with suitable example. CO2K4  
(or)  
17. (b) Explain in detail about Constructor and its types in C++. CO3K2
18. (a) Demonstrate how to overload unary and binary operators. CO3K5  
(or)  
18. (b) Illustrate multiple, multilevel and hierarchical inheritance with examples. CO3K4
19. (a) Define pointer. List out its advantages and disadvantages. Demonstrate how to declare a pointer to the derived class. CO4K6  
(or)  
19. (b) Explain why do we need virtual function. CO4K4
20. (a) Explain about File stream classes in C++. CO5K2  
(or)  
20. (b) Construct a C program to illustrate sequential access file operations. CO5K6

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