Aryan College

Object Oriented Technology and C++ Programming

<u>**Unit- 1**</u>   <u>**Introduction to Object Oriented Programming**</u>

1. What is OOP?   [2017]
2. Write short note on: [2017]
   a. Data Encapsulation
   b. Classes and Objects
3. What is a class?   [2016]
4. What is an object?   [2016]
5. What is functional programming?   [2016]
6. Define inheritance in OOP.   [2016]
7. What is polymorphism?   [2016, 2014]
8. What do you understand by object oriented Paradigm? Discuss the advantages of OOP.   [2016, 2013]
9. Compare and contrast Functional programming and Object Oriented programming approach   [2016]
10. What is overloading?
11. Explain the characteristics of Object Oriented Programming.   [2014]

<u>**Unit- 2**</u>   <u>**Introduction to C++**</u>

1. Define the term keyword in C++.   [2017, 2015]
2. Write the syntax for FOR statement.   [2017]
3. What do you mean by pointer?   [2017, 2015]
4. Which are the Access modifiers?   [2017]
5. How to achieve dynamic memory allocation?   [2017, 2016]
6. Write a program in C++ to find out largest number among 3 variable using by conditional operator.
                                                                                                     [2017, 2014]
7. Explain storage classes.   [2017, 2013]
8. Write a program to find out that given year is a leap year or not.   [2017]
9. What do you mean by Operator in CPP? Explain in detail.   [2017]
10. Write short note on: [2017]
    a. Structures
    b. Union
11. How can you include comments in C++ programs?   [2016]
12. Write a program in C++ to convert inches to centimeters. (1 inch equals 2.54 cm)   [2016]
13. Write a program to read a three digit integer and print the sum of three digits.   [2016]
14. Explain the usage and syntax of 'for' statement. Write a program using for loop to compute the sum of first n
    consecutive integers, for a given number n.   [2016]
15. What is the difference between while loop and do….while loop? Write the syntax for both, and illustrate the difference
    using small programs.   [2016]
16. What is extraction operator and also write the syntax?   [2015]
17. What do you mean by expression?   [2015]
18. What is recursion? Explain with suitable example.   [2015, 2014, 2013]
19. What is access specifier in C++?   [2015, 2013]
20. What is the difference between variable and constants?   [2015]
21. Define implicit calling.   [2015]
22. What are rules for defining an identifier?   [2015]
23. How to take input of an array in 1 line in C++? Explain with the help of example.   [2015]
24. Write a program to print factorial of given number.   [2015]
25. Define the term Token.   [2014]
26. What is Iteration in C++.   [2014]
27. Define the term 'Union'.   [2014]
28. What is Conditional Operator?   [2014]
29. Which are the dynamic Memory Allocation Operators in C++?   [2014]
30. Write a program to print 'Fibonacci Series'.   [2014]
31. Write a function to find out Factorial Number.   [2014]
32. What do you mean by Structure? Explain.   [2014, 2013]
33. Write a program in C++ to add two 2-D Matrix.   [2014]

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34. What do you mean by Control Statements? Explain in detail.   [2014]
35. Write a program to print the following:-   [2013]

```
                1
          1     2     1
      1       2     2       1
  1         2     3     2         1
```

36. Give difference between structures and class.   [2013]
37. Explain with example: [2013]
    a. Pointer to function
    b. Memory management operator
    c. Ternary operator

Unit- 3	Classes and their menbers

1. Define the container classes.   [2017, 2015, 2013]
2. What are static classes?   [2017, 2013]
3. How to define outline function in C++?   [2017]
4. How can one access private member of one class into another class in CPP?   [2017]
5. What is the difference between function overloading and function overriding?   [2017]
6. How do you achieve encapsulation in C++?   [2016]
7. What is function overloading? Give an example.   [2016, 2014]
8. Define inline member functions.   [2016]
9. What is a friend function in C++? Explain with an example.   [2016, 2014]
10. What do you understand by operator overloading? Give examples.   [2016, 2013]
11. Write short notes on: [2016]
    a. Functions
    b. Constructor
    c. Nested classes
    d. Dynamic memory allocation with example.   [2015, 2013]
    e. Modular programming and reusability
12. How to declare a destructor?   [2015]
13. What is the difference between copy constructor and an overloaded assignment constructor?   [2015]
14. How to implement is-A and has-A class relationship?   [2015]
15. What do you mean by constructor? Explain all types of constructor and also explain it with the help of suitable program.   [2015]
16. What do you mean by class and object? Explain with suitable examples and also describe the concepts of nested classes.   [2015]
17. What is the difference between overloading and overriding? Explain with suitable example.   [2015]
18. What is the difference between virtual and pure virtual function? Explain with suitable example and also describe the ambiguity error with it.   [2015]
19. Write short notes on :   [2015]
    a. Friend Function   [2013]
    b. Inline member function
    c. Static member function
    d. Concepts of OOP
    e. Operator overloading   [2014]
    f. Stream state member function
    g. Types of inheritance
20. What is Parameterized constructor?   [2014]
21. What do you mean by data member in a class?   [2014]
22. What is Abstract Class?   [2014]
23. What do you mean by Inheritance? Explain all types of Inheritance & also explain with the help of a program.   [2014]
24. What is Constructor & Destructor? Explain with an example.   [2014]
25. Explain the Pure Virtual Function with a suitable example.   [2014, 2013]
26. What is over loading?   [2013]

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27. What is overriding? [2013]
28. What is copy constructor? [2013]
29. What is class specifier? [2013]
30. What are nested classes? [2013]
31. Write a programming to check that given string is palindrome or not by using virtual function.[2013]
32. Write a program to print all prime numbers in between 102 to 250 by using method overloading. [2013]
33. What is inline function? Give advantages of inline function. [2013]
34. What is Destructor? Explain the utility of destructor. [2013]
35. Explain function overriding with example. [2013]

Unit- 4   **Inheritance and File handling**

1. Define the tellg and tellp functions. [2017]
2. What do you mean by inheritance? Also explain different types of inheritance with example [2017, 2013]
3. What do you mean by polymorphism? Exp[lain with the help of a CPP program. [2017]
4. What is the file in CPP? Write a program to copy data from one file to another file and also print output on the screen. [2017]
5. Write short note on Virtual Function. [2017]
6. Define pure virtual functions in C++. [2016]
7. Write a program to store numeric data in a file and display the same? [2013]