

| S.no | Program name  | Page no | Signature |
|------|---|---------|-----------|
| 1    | Program 01: write a c++ program to get the size of different type of datatypes.   | 1       |           |
| 02   | Program 02: write a c++ program to perform arithmetic operations using arithmetic operators.  | 2       |           |
| 03   | Program 03: write a c++ program to demonstrate the different types of relational operators .  | 3       |           |
| 04   | Program 04: write a c++ program to demonstrate the logical operators(&&,  ,!) .   | 4       |           |
| 05   | Program 05: write a c++ program to demonstrate the bitwise operators .  | 5       |           |
| 06   | Program 06: write a c++ program to read radius of a circle, calculate area and perimeter and display them.(using const constant).   | 6       |           |
| 07   | Program 07: write a c++ program for assuming that res starts with the value 25 and p with 3,so print the following code:-   | 7       |           |
| 08   | Program 08: write a c++ program to input number of week's day(1-7) and translate to its equivalent name of the day of the week using switch case.   | 8       |           |
| 09   | Program 09: write a c++ program to make basic calculator using switch case.   | 9       |           |
| 10   | Program 10: write a c++ program to find largest number among three numbers using ternary operator.  | 10      |           |
| 11   | Program 11: write a c++ program using for loop to print numbers from 1 to 10.   | 11      |           |
| 12   | Program 12: write a c++ program to display 2,4,6,8.....,18,20 using while loop.   | 12      |           |
| 13   | Program 13 : write a c++ program to print following patterns<br><pre>           * * * * b) *      c) 1      d) *           * * *      * *      1 2      * *           * *      * * *      1 2 3      * * *           *      * * * *      1 2 3 4      * * * *</pre> | 13-14   |           |
| 14   | Program 14: write a c++ program to display the cube of the number up to an integer.   | 15      |           |
| 15   | Program 15: write a c++ program to check for equality of two numbers without using arithmetic or comparison operator.   | 16      |           |

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| 16 | Program 16: write a c++ program to calculate value of 132 x 8 without using “*” operator  | 17 |  |
| 17 | Program 17: write a c++ program to find area of rectangle (using #define).  | 18 |  |
| 18 | Program 18: write a c++ program to demonstrate explicitly typecasting..   | 19 |  |
| 19 | Program 19: write a c++ program to display addition of first 1 to 20 odd numbers and also display addition of first 1 to 20 even numbers.   | 20 |  |
| 20 | Program 20: write a c++ program for a given problem – where age will be taken as input by the user and if age is greater than 18 and gender is “male(m/m)” than print message to send him to “room number 10” for voting and if gender is “female(f/f)” than print message to send her to “room number 12”,if gender is none of these two than send them to “room number 8”.also given message “not eligible for voting” in case of age is less than 18.(using nested if control structure) | 21 |  |
| 21 | Program 21: write a c++ program to print hollow square pattern using for loop..   | 22 |  |
| 22 | Program 22: write a c++ program to take input between 1-25 at runtime and display “thank you user” for selecting number between 1-25 otherwise display ”please enter number between 1-25 only!!”.(using while loop).  | 23 |  |
| 23 | Program 23: write a c++ program to find number is positive, negative or zero using “ goto ” jump statement..  | 24 |  |
| 24 | Program 24: write a c++ program to differentiate break and continue jump statement.   | 25 |  |
| 25 | Program 25. Write a c++ program to display details of 5 students’ detail should be contained student name, roll number, marks using structure.  | 26 |  |
| 26 | Program 26. Write a c++ program to create a structure named “date” which contains three members day, month, year and display current date entering by the user using function definition.   | 28 |  |
| 27 | Program 27. Write a c++ program to demonstrate enum with switch case.   | 29 |  |
| 28 | Program 28. Write a c++ program to create an enum having number of enum list or elements and count  | 31 |  |

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|    | the size of elements inside the enum.   |    |  |
| 29 | Program 29. Write a c++ program to swap two values without using third variable.  | 32 |  |
| 30 | Program 30. Write a c++ program to swap two values using third variable of call by address function invoking.   | 33 |  |
| 31 | Program 31. Write a c++ program to illustrate working of call by value of a function invoking.  | 34 |  |
| 32 | Program 32. Write a c++ program to illustrate working of call by reference method of a function invoking.   | 35 |  |
| 33 | Program 33. Write a c++ program to calculate simple interest using default arguments.   | 36 |  |
| 34 | Program 34. Write a c++ program using function template to add two integers and two float number.   | 37 |  |
| 35 | Program 35. Write a c++ program to create simple calculator using class templates.  | 38 |  |
| 37 | Program 37. Write a c++ program to demonstrate function overloading.  | 42 |  |
| 38 | Program 38. Write a c++ program to find the size of 1-d, 2-d and multidimensional array.  | 43 |  |
| 39 | Program 39. Write a c++ program create and display one-d array of size 7 and also display average of all the elements.  | 45 |  |
| 40 | Program 40. Write a c++ program to input 5 numbers in an array and print all the numbers from the backside of the array.  | 46 |  |
| 41 | Program 41. Write a c++ program create class named “student”, having two data member of private specifier name rollno and marks. And make marks data member as array of size 5. Student class also contains public member function named getdata( ), showdata( ), and totalmarks( ) which will define outside of the class. Getdata( ) will take input from the user only, showdata( ) will show the input data from the user, and totalmarks( ) will sum all the 5 marks of subject and display the total marks. | 47 |  |
| 42 | Program 42. Write a c++ program to find greatest number among three numbers implementing the nesting of member function.  | 49 |  |
| 43 | Program 43. Write a c++ program to create class named “my_class”, having two private member of  | 51 |  |

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|              | integer type. And perform addition, multiplication, and subtraction operation inside the class body.   |       |         |      |          |              |              |    |  |
| 44           | Program 44. Write a c++ program to make outside function inline.   | 53    |         |      |          |              |              |    |  |
| 45           | Program 45. Write a c++ program to keep count of created object using static member.   | 54    |         |      |          |              |              |    |  |
| 46           | Program 46. Define a class candidate in c++ with the following description:=<br>Private member:- <ul style="list-style-type: none"><li>• a data member rno (registration number) of type long.</li><li>• a data member name of type string.</li><li>• a data member score of type float.</li><li>• a data member remarks of type string.</li><li>• a member function assignrem( ) to assign remarks as per the score obtained by a candidate. Score range and the respective remarks are shown as follows:<table><tr><td>Score</td><td>remarks</td></tr><tr><td>&gt;=50</td><td>selected</td></tr><tr><td>Less than 50</td><td>not selected</td></tr></table></li></ul><br>Public member:- <ul style="list-style-type: none"><li>• a member function enter( ) to allow user to enter values for rno, name, score and call function assignrem( ) to assign the remarks.</li><li>• a member function display( ) to allow user to view the content of all the data members.</li></ul> | Score | remarks | >=50 | selected | Less than 50 | not selected | 55 |  |
| Score        | remarks  |       |         |      |          |              |              |    |  |
| >=50         | selected   |       |         |      |          |              |              |    |  |
| Less than 50 | not selected   |       |         |      |          |              |              |    |  |
| 47           | Program 47. Write a c++ program to implement single inheritance.   | 57    |         |      |          |              |              |    |  |
| 48           | Program 48. Write a c++ program to implement multiple inheritance.   | 59    |         |      |          |              |              |    |  |
| 49           | Program 49.write a c++ program to implement multilevel inheritance..   | 61    |         |      |          |              |              |    |  |
| 50           | Program 50.write a c++ program to initialize three integer values through constructor using parameter.   | 62    |         |      |          |              |              |    |  |
| 51           | Program 51.write a c++ program to illustrate order of invocation for these, define two class first class named “sub” and second named “mark” in c++ with the following description:=<br>Class “sub” contains -<br>Private member:-   | 64    |         |      |          |              |              |    |  |

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|    | <ul style="list-style-type: none"> <li>• a data member ppr1_code of type int.</li> <li>• a data member ppr2_code of type int.</li> </ul> <p>Public member:-</p> <ul style="list-style-type: none"> <li>• a default constructor which initializes and display the private member of its class.</li> </ul> <p>Class “mark” contains –</p> <p>Private member:-</p> <ul style="list-style-type: none"> <li>• a data member ppr1_mark of type float.</li> <li>• a data member ppr2_mark of type float.</li> </ul> <p>Public member:-</p> <ul style="list-style-type: none"> <li>• a parameterized constructor which initializes and display the private member of its class.</li> </ul> <p>Create an object of sub class inside these class.</p> |    |  |
| 52 | Program 52. Write a c++ program to invoke a constructor having default argument.  | 66 |  |
| 53 | Program 53. Write a c++ program to copy one object variable to another object using copy constructor.   | 67 |  |
| 54 | Program 54. Write a c++ program to perform constructor overloading having three constructor within a class.   | 69 |  |
| 55 | Program 55. Write a c++ program to allocate and deallocate memory at run time for a variable.   | 71 |  |
| 56 | Program 56. Write a c++ program to demonstrate run time polymorphism(function overriding).  | 72 |  |
| 57 | Program 57. Write a c++ program to create a class named “student” having two private member name type string and age type int. And in public section class contain one member function named “stu_info” which initializes the data members of its class at run time and one another member function named “show_info” which display the detail of a student (name,age). And invoke them using pointer to object.  | 73 |  |
| 58 | Program 58. Write a c++ program to illustrate functioning of this pointer.  | 74 |  |
| 59 | Program 59. Write a c++ program to create two classes (named first_class and second_class), and perform multiplication of two number (where first number is public data member of first_class and second number is public data member of second_class) using friend function.   | 75 |  |

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| 60 | Program 60. Write a c++ program to the working of virtual function.  | 77 |  |
| 61 | Program 61. Write a c++ program to the working of pure virtual function.   | 78 |  |
| 62 | Program 62. Write a c++ program to find large number between two number using friend class.  | 79 |  |
| 63 | Program 63. Write a c++ program to for operator overloading to compare two objects are equal are not using == operator.  | 80 |  |
| 64 | Program 64. Write a c++ program to illustrate unary operator overloading on increment operator by using member function.   | 82 |  |
| 65 | Program 65. Write a c++ program to add two complex number using + operator overloading by friend function.   | 83 |  |
| 66 | Program 66. Write a c++ program to illustrate unary minus operator overloading using friend function   | 85 |  |
| 67 | Program 67. Write a c++ program to demonstrate the use of >> and getline( ) for reading the string.  | 87 |  |
| 68 | Program 68. Write a c++ program to create a file named “rudra” using constructor.  | 88 |  |
| 69 | Program 69. Write a c++ program to create a file name “info” using open function having details about your name,age,class and address.and display them into the console using eof(). | 89 |  |
| 70 | Program 70. Write a c++ program to perform truncate operation in a file existing file named “file”.  | 90 |  |
| 71 | Program 71. Write a c++ program to open existing file name “shiva” in append mode to add some content in a file.   | 91 |  |
| 72 | Program 72. Write a c++ program to find current position of input/output pointer of a file.  | 93 |  |
| 73 | Program 73. Write a c++ program to differentiate read( ) and getline( ) function.  | 94 |  |
| 74 | Program 74. Write a c++ program to demonstrate manipulators(setw, setprecision, setbase, setfill).   | 95 |  |
| 75 | Program 75. Write a c++ program which reads input from the keyboard whose width specified with 8 and unused space filled with '#'and input should be left-justified.                 | 96 |  |
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