| S.No | Questions |
|---|---|
| 1 | Write a program to read in two integers and determine if they are equal or not. |
| 2 | Write a program to read in three integers and determine which one is the maximum using the ternary conditional operator |
| 3 | Write a program to read in an integer and print the factorial of that number using a for loop. |
| 4 | Write a program to print the following pattern using nested for loops: |

```
1
22
333
4444
55555
```

| | |
|---|---|
| 5 | Write a C++ program to reverse the elements of an array |
| 6 | Write a C++ program to overload the + operator to add two complex numbers |
| 7 | Write a C++ program to create a class for a student with a constructor and a destructor. |
| 8 | Create a class product. |

* Define a function get_product() and get the name of the product and its price.

* Define a function print_product() and display the product and its price.

* Create an array of object to call the above functions.[Note: Array size: generalized]

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| 9 | Write a program to read in three integers and compute the average of the three numbers. Use the assignment operator to store the result in a variable |
| 10 | Write a program to read in an integer and determine if it is a prime number or not using a for loop. |
| 11 | Write a C++ program to find the second largest element in an array |
| 12 | Write a program to read in two integers and use the conditional operator to determine which number is greater. |
| 13 | Write a program to read in two integers and compute their greatest common divisor using a do-while loop |
| 14 | Write a single C++ program : |

(i) To find the square root of a number using a function. [Let the returntype of the function be void]

(ii) To increment and Decrement a number using an inline function

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| 15 | Write a C++ program to demonstrate the use of try-catch blocks for handling exceptions |
| 16 | Write a C++ program to create a class for a rectangle with a constructor and a destructor |

| 17 | Write a C++ program to find the sum of elements in an array. |
| 18 | Write a function to convert a given temperature from Celsius to Fahrenheit |

19      Write a program to print the following pattern using nested for loops:

```
    *
   **
  ***
 ****
*****
```

| 20 | Write a C++ program to add 2 matrics. |
| 21 | Write a C++ program that demonstrates the use of pointers to change the local values of variables defined in one function from within another function. Create two functions, **main()** and **modifyValues()**. The **main()** function should declare local variables, and the **modifyValues()** function should take pointers as parameters to modify the values of these local variables. |
| 22 | Write a Program to design a class to represent a matrix. The class should have the functionality to insert and retrieve the elements of the matrix |
| 23 | Write a C++ program to create a class for a bank account with a constructor and a destructor |
| 24 | Create a base class called Employee with data members for name, id, and salary. Derive two classes Manager and Engineer from the base class. The Manager class should have additional data members for department and bonus, while the Engineer class should have additional data members for specialty and hours. Write member functions to get and set the data members for each class. |
| 25 | Write a C++ program to delete an element from an array at a specific position |
| 26 | Write a function to count the number of words in a given string. |
| 27 | Write a C++ program to overload a function to concatenate two strings and two character arrays separately |
| 28 | Write a C++ program to create a pointer to an object and display its attributes. |
| 29 | Write a C++ program to demonstrate the use of multiple catch blocks for handling different types of exceptions |
| 30 | Write a C++ program to demonstrate operator overloading using dot operator for i) Perfect Number checking ii) Armstrong Number Checking |
| 31 | Write a C++ program find sum of diagonals of the matrics. |
| 32 | Write a program to enter the marks of a student in four subjects. Then calculate the total and aggregate, display the grade obtained by the student. If the student scores an aggregate greater than 75%, then the grade is Distinction. If aggregate is 60>= and <75, then the grade is First Division. If aggregate is 50 >= and <60, then the grade is Second Division. If aggregate is 40>= and <50, then the grade is Third Division. Else the grade is Fail. |

33   Write a C++ program to create a pointer to an array of characters and display its values.
34   Write a C++ code to find area of square and circle using abstract class and pure virtual
     function Enter radius of the circle: 5
     Enter the length of the square: 4
     Area of square: 16
     Area of circle: 78.5
35   Write a function to determine if a given integer is a prime number or not
36   Write a C++ program to demonstrate the use of the standard exception class for handling
     exceptions.
37   Write a C++ program to overload the - operator to subtract two complex numbers.

38   Write a C++ program to overload the * operator to multiply two matrices

39   Develop  a program using function to calculate the simple interest. Suppose the customer is a
     senior citizen. He is being offered 12 percent rate of interest; for all other customers, the ROI is
     10 percent.
40   Create a base class called Shape with data members for height and width. Derive two
     classes Rectangle and Triangle from the base class. Write member functions to calculate
     the area and perimeter of each class.

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