MCA 2nd Semester – 2019-2020
OOP using C++ Lab Programming Questions

1. Read the name of the student, roll, and marks in four subjects. Display name, roll, total and average marks in the given format:
   Name:
   Roll:
   Total Marks:
   Average Marks:
2. Read two numbers. Swap it.
3. Read principal, rate, and time. Calculate simple interest and amount.
4. Read the radius of the circle. Calculate area and circumference.
5. Read temperature in degree. Change into Fahrenheit.
6. Read the number of computers and the cost of one computer. Display the total cost of computers.
7. Read two characters. Interchange it.
8. Read a character. Check vowel or not.
9. Read an arithmetic character. Display the operator's name.
10. Read the month number. Display the number of days.
11. Read a number. Check even or odd.
12. Read a number. Check the number is divisible by either 3 or 7.
13. Read the age of a driver. Display the license fees accordingly:

Age	Fees
50 – 60	Rs. 1000/-
40 – 49	Rs. 1500/-
30 – 39	Rs. 2000/-
18 – 29	Rs. 3000/-

14. Read a number. Check single-digit or double-digit or triple-digit or more than three digits.
15. Read two numbers. If both are the same then display its sum. If 1st number is more than number then display the reminder. Otherwise, display the product.

Loop Questions:

16. Display 1st twenty natural numbers.
17. Display the series 1 2 3 ……n.
18. Display the series n n-1 n-2 ……1.
19. Display the series n n-2 n-4……2.
20. Read two numbers. Display the series from 1st number to 2nd number.
21. Read three positive numbers. Print the series from 1 to the biggest number.
22. Read n numbers. Print the biggest and smallest number.
23. Print the Fibonacci series 0 1 1 2 3 5 8 ……
24. Read n numbers. Print its sum and average.
25. Read n numbers. Count the total number even and odd numbers.
26. Check a number is prime or not.
27. Check a number is perfect or not.
28. Input a number. Then display the sum of digits.
29. Read 10 numbers. Then count and display the number of single and double digits.
30. Read n number of candidate's age. Then count the total number of eligible candidates and not eligible candidates for voting.

Nested Loop Questions:

31. Read n numbers. Then count the total number of prime numbers.
32. Display the multiplication table of an input number.
33. Display multiplication tables from 10 to 20.
34. Display all the prime numbers from 1 to 100.
35. Check a number is Armstrong number or not.

36. Input a number. Then display its reverse.
37. Display the number and its reverse from 100 to 120.
38. Display all the twin prime numbers from 1 to 100.
Output:
3 5
5 7

Note: The immediate two prime numbers difference must be 2.
39. Display all the prime numbers from m to n.
Example:
Input: m=5
n=10
Output: 5 7
40. Read a number. Display the even sum of digits and the odd sum of digits.
Example: Input: 123348
Output: 14 (2+4+8)
7 (1+3+3)
41. Print the number and its factorial from 0 to 10 in the given format:
0! = 1
1! = 1
2! = 2
…….
42. 1 2 3 4
5 6 7 8
9 10 11 12
43. 1 1 1 1
2 2 2 2
3 3 3 3
44. * * * *
* * *
* *
*

Function Questions:
45. Read three numbers. Print the biggest and smallest.
46. Check a number is prime or not.
47. Check a number is Armstrong number or not.
48. Reverse a number.
49. Read two numbers. Print the HCF.
50. Read two numbers. Print the LCM.
51. Print the series 1 3 5 ……..n.
52. Swapping of two numbers.
53. Swapping of two strings.
54. Print an input number's multiplication table.
55. Print the Fibonacci series.

Array Questions:
56. Assign 5, 10, 6, 12, 7, 45, and 67 in an array called NUM. Then display the numbers and display the reversed array.
57. Read 10 numbers in an array. Then display the numbers, sum, and average.
58. Read n numbers in an array. Then display the numbers, the biggest and the smallest number.
59. Arrange n numbers in an array in ascending order.
60. Read n numbers in an array. Then display all prime numbers and the total number of prime numbers.

61. Read n students name, roll, branch, and total marks in four arrays. Then display all in the given format:

Roll Name Branch Total Marks

62. Read n numbers in an array. Then check a given number is present in the array or not.

63. Read n students' names in an array. Then check a given name is present in the array or not.

Matrix Questions:

64. Assign 5, 10, 6, 12, 7, 45, 67, and 1 in a matrix called MAT of order 4X2. Then display the matrix and display the reverse matrix.

65. Read 10 numbers in a matrix of order 5X2. Then display the matrix and its sum.

66. Read rXc numbers in a matrix. Then display the matrix and print the biggest and smallest number.

67. Read rXc numbers in a matrix. Then display the matrix. And display all prime numbers without changing its original position in the matrix.

68. Add two matrices of order 2X3.

69. Multiply two matrices of order 3X2 and 2X4.

70. Read 12 numbers in a matrix of order 3X4. Then display the matrix along with the row sum and column sum.

Example:

1	3	4	7	15
4	2	2	5	13
5	1	3	6	15
10	6	9	18	