

Vision Institute of Technology Kanpur

Notes of Programming for Problem Solving(KCS201)

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Subjective Question(UNIT 3)

1. Write a program in C to check whether a given number is even or odd.
2. Write a 'C' program to test whether a given year is Leap or not. Also Draw the flow chart and Write algorithm. **(2008)**
3. Write a program in 'c' to find the largest among the three input integers. Also Draw the flow chart and Write algorithm.. **(2008,09)**
4. Write a 'C' program to find all the roots of a quadratics equation.
5. In an examination ,the grades are given according to the marks obtained. Write a program in 'C' to display the grades accordingly:

Marks	Grades
80 % and above	Distinction
60 % or more but less than 80 %	First Division
45 % or more but less than 60 %	Second Division
40 % or more but less than 45 %	Pass
Less than 40 %	Promotion not Granted

1. What is the use of SWITCH statement? Write the syntax of switch statement and explain how it is different from IF statement **(2009,10)**
2. Simulate Calculator using switch statement. **(2009)**
3. Explain Difference between " while" and "do while" Loop taking an example. **(2009,12)**
4. Explain 'break' statement in brief. **(2009)**
5. Explain 'continue' statement in brief. **(2009)**
6. Write a program in 'C' to calculate the sum of the following series upto 50terms.
Sum= $1^3 + 3^3 + 5^3 + 7^3 + \dots + 50$ terms **(2008)**

Also Draw the flow chart and Write algorithm.

7. Write a ' c' program to calculate the sum of the following series upto 50 terms
Sum= $-1^3 + 3^3 - 5^3 + 7^3 - \dots + 50$ terms **(2009)**
8. Write a program in 'C' to check whether an integer no is prime or not. Also Draw the flow chart and Write algorithm. **(2009,11)**

9. A number is input through the keyboard. Write a program in 'C' to calculate sum of digit. Also Draw the flow chart and Write algorithm. **(2008)**
10. Write a C program which reverse the digits of the integer input given to it. For Example an input 65367 is outputted as 76356. Also Draw the flow chart and Write algorithm. **(2009)**
11. Write a program to generate nth Fibonacci series. **(2009,10,11)**
12. Write a program in 'C' to calculate the factorial of a number. Also Draw the flow chart and Write algorithm. **(2009)**
13. Write a 'C' program to compute the greatest common divisor/Highest common factor(gcd/HCF) of two positive integers **(2009,11)**
14. Write a 'C' program to compute the Least common multiple(LCM) of two positive integers
15. write a program in 'C' to check whether a given no is palindrome or not. Also Draw the flow chart and Write algorithm.
16. Write a C program to generate the following pattern. **(2008)**

(a) *	(b)1	(c) 1	(d)****
**	22	12	***
***	333	123	**
****	4444	1234	*

17. Explain Local and Global variables.
18. Show with example how arguments are passed using 'Call by Value' and 'Call by reference' respectively. **(2008,09,10,11,12)**
19. What are the difference between actual and formal parameters.
20. What is function? Explain the difference between the definition of a function and the declaration of a function. **(2008)**
21. Write a C function to interchange the value of two variable without using third variable? **(2008)**
22. Write a function in 'C' to calculate factorial of a given no. **(2009)**
23. Write a program in 'c' that accept the length and width of a rectangle and print the area. the area of a rectangle is calculated by a function and returns it values to main program where it is printed. The values of length and width of rectangle are accepted from the keyboard. **(2010)**
24. Write a function in 'C' to add first seven terms of the following series using a for loop:

$$\frac{1}{1!} + \frac{2}{2!} + \frac{3}{3!} + \dots$$
 (2008)
25. Explain recursion? Write a recursive C Program to calculate the factorial of a given integer. **(2008,09,11,12)**