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| **Unit – 2** | | |
| **Day – 7** | | |
| **Lec #** | **Topics to be covered :** | **Assignments :** |
| 1 | Nested loop  Do while construct  Which loop should be used? | **Essential Assignment:**   1. Write a program in C to display a sum of even numbers up to N with while and do while loop. Take N from the user. If user gives 10 as input then sum=2+4+6+8+10. 2. Find out the sum of the following series:   1+2+3+……+n . Take n as input from the user.   1. Find out the sum of the following series :   12 +22 +32 +42 ….. up to nth terms . If user enters n=5 then it will do the sum of 12 +22 +32 +42+52 .   1. Write a program in C to print all the numbers and sum of all the integers that are greater than 100 and less than 200 and are divisible by 7. Modify the above program so that it takes starting and ending limits from the user. 2. Write a C program to design the following pattern:   1  1 4  1 4 9  1 4 9 16  1 4 9 16 25  **Desirable Assignment:**  1. Find out the sum of the following series  1 +1/4 +1/9 +1/16 +….n terms. If user enters n=4 then it will do the sum like 1+ 1/4 + 1/9 +1/16  2. Write a C program to design the following pattern:  a b c d e  a b c d  a b c  a b  a  3. Write a C program to check whether the given number is perfect or not.  Hint: A perfect number is a positive integer that is equal to the sum of its positive divisors, excluding the number itself.  For example, 6 is a positive number that is completely divisible by 1, 2, and 3. When we add these divisors (1 + 2 + 3 = 6), it produces 6, which is equal to the number that we have considered. So, we can say that 6 is a perfect number.  4. Write a C Program to check given number is Armstrong or not.  Hint: A number is Armstrong if sum of cube of every digit is same as the original number  E.g. 153 = 13 +53 + 33 =153 .  Case 1:  Enter any number :153  It is Armstrong number  Case 2:  Enter any number :123  It is not Armstrong number  5. Write a C Program to find out largest digit from the given four-digit integer number.  (Hint: 2354 , 5 is the greatest) |
| 2 | goto statement  Special control statements (break, continue) |
| **MCQ Questions** | | |
| 1 | A labeled statement consists of an identifier followed by  a) ;  b) :  c) ,  d) =  ANS:\_\_\_\_ | |
| 2 | For loop in a C program, if the condition is missing then  a) it is assumed to be present and taken to be false  b) it is assumed to be present and taken to the true  c) it results in a syntax error  d) execution will be terminated abruptly  **ANS: \_\_** | |
| 3 | What is the output of the following program?  int main()  {  int k, j;  for(k=1, j=10; k <= 5; k++)  {  printf("%d ", (k+j));  }  return 0;  }  A) compiler error  B) 10 10 10 10 10  C) 11 12 13 14 15  D) None of the above  ANS:\_\_\_\_\_\_ | |
| 4 | What is the output of the following program?  int main()  {  int j = 0;  do  {  j++;    }  while(j<5);  printf("%d",j);  }  A. 3  B. 4  C. 5  D. 1  ANS:\_\_\_\_\_\_\_ | |