

MODEL PAPER OF CONCEPTS OF COMPUTER PROGRAMMING IN C

SECTION B: LONG ANSWER QUESTIONS

Q1. WAP to Generate the Pyramid Pattern of No as Shown below.

```

          0
        1 0 1
      2 1 0 1 2
    3 2 1 0 1 2 3
```

Q2. . WAP to find the average of six subjects and display the results as follows.

Average	Results
>34 & <49	Third Division
>50 & <60	Second Division
> 59& <75	First Division
>76&<=100	Distinction

If marks any subjects is less than 34 print Fail

Q3. WAP to check whether the entered year is a leap year or not.

Q4. WAP to convert Decimal No to Binary No.

Q5. If his basic salary is less than Rs1500 then DA= 90% of basic salary and HRA= 10% of basic. If his salary is either equal to or above Rs1500 then HRA=500 and DA= 98% of basic find his Gross salary

Q6. Design a structure Student-record to contain name, date_of_birth and total_marks obtained. The date structure should have the following 3 integer members day, month and year. Develop a program to read the date for 10 students in a class and display them rank wise.

Q7. Write a program using pointers to read in an array of 10 integers and print its elements in reverse order.

Q8. Write a program that transposes a m x n matrix. The main function provides for the values of m and n. The program should call a function to transpose the matrix.

Q9. Write a program which reads a string and counts all occurrences of a particular word. The word is entered through the keyboard and so is the string and then the program prints the count .

Q10. Write a C program to arrange a list of names in ascending order.

Q11. Write a c program to convert all lowercase letters of an input string into uppercase and vice versa.

Q12. Write a C program to sort an array of integers in ascending order.

Q13. Write a C program to find the sum of the series ----
 $1 + X + X^2 + X^3 + \dots + X^n$

Q14. Write a program in C to calculate sine and cosine values of the angles $0, 10^\circ, 20^\circ, 30^\circ, \dots, 180^\circ$.

Q15. Using pointer, write a function that receives a character string and a character as argument and deletes all occurrences of this character in this string. Function should return the corrected string without spaces.

Q16. Create a structure to specify data on students given below:
Roll_number, name, department, course and year of joining.

Assume that there are not more than 450 students. Write a function to print the names of all students who joined in a particular year.

Q17. Write a function swap (exchanges two values) of integers. Write the main function and input the numbers from the terminal.

Q18. Write a function **int count (char *str, char c)** which accepts a string and a character as arguments and returns the total count of occurrences of character **c** in string **str** otherwise 0.

Q19. Write a recursive function, **int sum (int n)** that returns :
 $2 + 4 + 6 + \dots + 2n$

Q20. Write a function **int arrsum (int arr[], int num)** that takes two arguments : an integer array and the number of elements in the array and returns as its output the sum of the elements in the array.

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