Q.P. Code :18549

(Time: 3 Hours) **[Max. Marks 80]**

Please check whether you have got the right question paper.

N.B

(1) Question no. 1 is compulsory.
(2) Attempt any 3 from the remaining questions.
(3) Assume suitable data if necessary.
(4) Figures to right indicate full marks.

Q1(a)	List and explain the symbols used in a drawing a flowchart.	**05**
Q1(b)	Compare switch control statement with if-else ladder.	**05**
Q.1(c)	Explain with example significance of continue, break, goto and return statements.	**10**
Q2(a)	WAP to cyclically rotate the elements of an array. Program should accept a choice in which direction to rotate - left or right. Depending on the choice it should perform cyclic permutation. Left rotation: i/p={1,2,3,4,5} o/p={2,3,4,5,1} Right rotation: i/p={1,2,3,4,5} o/p={5,1,2,3,4}	**10**
Q2(b)	Explain Recursion. WAP using recursive function 'power' to compute x^n power(x,n) = 1 if n=0 power(x,n) = x if n=1 power(x,n) = power(x , n-1) otherwise	**10**
Q3(a)	WAP to find trace and norm of a square matrix. Note: Trace: Sum of diagonal elements of a square matrix Norm: Square root of sum of the squares of all the elements of the matrix.	**10**
Q3(b)	What is FILE? What are different modes in which file can be opened? What are the different functions available to read and write to file?	**10**
Q4(a)	WAP for solving the following series. $S = x - x^3/3! + x^5/5! - x^7/7! + \ldots\ldots\ldots x^n/n!$	**7**
Q.4(b)	What is a pointer? Explain how the pointer variable declared and initialized and Comment on size of pointer variable.	**3**
Q4 (c)	What is an operator? Explain the arithmetic, relational, logical, bitwise and assignment operators in C language with examples.	**10**
Q5(a)	Define structure Employee with following details (i) Employee code (ii) Employee name (iii) Employee salary (iv) Employee date of joining (dd/mm/yyyy) (Note: Use nested structure) Write a program to read atleast 10 records of employees and display them in ascending order of employee code.	**10**
Q5(b)	Explain storage classes with examples.	**10**

Q6 (a)	What is function? What are function parameters? Explain parameters passing techniques with examples.	10
Q.6(b)	Write user defined functions for following string operations (i) To copy one string to another (ii) To compare one string with another	10
