22374

23124

3 Hours / 70 Marks   Seat No.

Instructions – (1) All Questions are *Compulsory.*

(2) Answer each next main Question on a new page.

(3) Illustrate your answers with neat sketches wherever necessary.

(4) Figures to the right indicate full marks.

(5) Assume suitable data, if necessary.

(6) Use of Non-programmable Electronic Pocket Calculator is permissible.

(7) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1.   **Attempt any <u>FIVE</u> of the following:**   **10**

a) List any four keywords used in 'C'.

b) Define array.

c) Define structure and write its syntax.

d) List features of preprocessors.

e) Distinguish between while and do-while loop.

f) Declare and initialize two dimensional integer array with 3 × 3 size.

g) State file inclusive directives.

Marks

2. Attempt any <u>THREE</u> of the following: 12

a) Explain the relational operators with example.

b) Write the syntax of while loop with example.

c) Explain one dimensional array. Also explain how to declare and initialize one dimensional array with example.

d) Write a program to declare structure 'student' having data members as rollno, name and marks. Accept this data for three students and display it.

3. Attempt any <u>THREE</u> of the following: 12

a) Explain pointer arithmetic operations with examples.

b) Describe process of macro expansion.

c) Write a program to accept marks of four subjects as input from user. Calculate and display total and percentage of students.

d) Write a program for displaying greater number among the three numbers.

e) State the need of a function and describe categories of function.

4. Attempt any <u>THREE</u> of the following: 12

a) Explain strlen( ), strcat( ), strcmp( ) and strcpy( ) functions.

b) Write a program using structure 'book' having data members as book name, book author, and book price. Accept this data for one structure variable and display accepted data.

c) Write a program using pointers for performing basic arithmetic operations on two integer variables.

d) Write a program for calculating area and circumference of circle by taking input of radius from the user.

e) Explain switch case statement with suitable example.

Marks

5. **Attempt any TWO of the following:** **12**

a) Write a program using switch statement to check whether entered character is VOWEL or CONSONANT.

b) Write a program to read two strings and find whether they are equal or not without using standard library function.

c) Develop a program to calculate factorial of a number using recursion.

6. **Attempt any TWO of the following:** **12**

a) Write a program to calculate sum of all the odd numbers between 1 to 20.

b) Write a program for addition of 3 × 3 matrices.

c) Write a program using function for checking a given number is prime or not prime.

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