

Time : Three hours

Maximum : 100 marks

Answer any FIVE questions.

All questions carry equal marks.

1. (a) What must be program characteristics which make a program a perfect program?
(b) Write a C program to find the area of a triangle given three sides a, b, c? Write all possible conditions.
2. (a) What are different types of conditional statements are implemented in C? What are different types of operators in C?
(b) Write about any six library functions and their format in C.
3. (a) Summarize the purpose of the flags that are commonly used in printf function.
(b) Calculate volume and area of a sphere using the formulas $V = 4\pi r^3 / 3$, $A = 4\pi r^2$ Just what type of variables must be used in this program.
4. (a) Explain about break, continue and switch statements with an examples.
(b) Using while statement and do while statements compute factorial of a given number.
5. (a) Summarize the rules that apply to a function call? What are the relationship between formal and actual arguments? What are function prototypes?
(b) Write a program using recursion only, to find x^n .
6. (a) Write a program to generate Fibonacci numbers between two given numbers.
(b) Given a lists of strings sort the same using two dimensional arrays.
7. (a) What is Pointer Arithmetic? Explain the operations which can be applied on pointers.
(b) Explain about call by value and call by reference using example.
8. (a) What is a structure? What are the operations which can be applied to a structure?
(b) Writa a program to create a linked lists.
9. (a) How do you create a data file? What are the operations on a file?
(b) Write a program to create a file of Account no. and name.
10. Write short notes on the following:
 - (a) Pre processor
 - (b) Type def
 - (c) Enum type
 - (d) Goto statements.