



ADITYA DEGREE COLLEGES

VI SEMESTER- PRE-FINAL

III BSc :: PHYSICS-CLUSTER

COMPUTATIONAL METHODS AND PROGRAMMING Max. Marks: 75

Time: AN

Date :

SECTION -A

Answer Any Five Questions

5X 5 =25M

1. Define Variable and Rules for naming a variable
2. Write about switch case with example
3. Write about input output statements in c
4. Write a program to find biggest of two numbers
5. Write about arrays briefly
6. Write about Recursion with an example
7. Explain the concept of Linear Interpolation
8. Explain the methods of Newton-Raphson .

SECTION -B

Answer All Questions

5 X 10 =50M

9.a) Explain various Operators available in C

OR

b) What is Data type. Write about various Data types in C

10.a) Write about Decision making Control structures in C

OR

b). List and example any 10 Mathematical Functions in C

11 a). Write about Looping Control structures

OR

b) Write about types of arrays in C

12 a). Write about storage classes in C with examples.

OR

b). $x \sin x + \cos x = 0$ using Newton-Raphson Method

13 a). Using Lagrange's formula calculate $f(3)$ from the following data

x	0	1	2	4	5	6
f(x)	1	14	15	5	6	19

OR

b). Using Taylor's series Method, solve the equation

$$\frac{dy}{dx} = x^2 + y^2 \text{ for } x=0.4. \text{ given that } y=0 \text{ when } x=0$$