

**B.C.A. Semester – II**  
**BCA-205 : Advanced Programming Language ‘C’**

Teaching Scheme (per week)		Teaching Scheme (per semester)		Examination Scheme					
				INT		EXT		TOTAL	
Th. (hours)	Pr. (hours)	Total Hours	Credit	Th. (marks)	Pr. (marks)	Th. (marks)	Pr. (marks)	Th. (marks)	Pr. (marks)
--	4	40	4	--	30	--	70	--	100

**Practical based on Advanced Programming Language ‘C’**

**University Examination Duration: 3 Hours (Per Batch)**

**(Practical List)**

1. Write a program to check the no. is Palindrome or not using UDF.
2. Write a program to find factorial of given no using UDF.
3. Write a program to find factorial of given no using recursion.
4. Write a program to display first 25 terms of Fibonacci series using recursion.
5. Write a program using a recursive function to find the GCD(Greatest Common Divisor) of two Positive integer numbers.
6. Write a program to swap value of two integer number using UDF
7. Write a function prime that returns 1 if its argument is a prime and return zero Otherwise.
8. Write a program that will print the longest word written in a line using UDF.
9. Write a program that will scan a character string passed as an argument and convert all Lowercase character into their uppercase equivalents using UDF.
10. Write a program that uses a UDF to sort an array of integer.
11. Write a program to search a number within an array using UDF.
12. Write a program which explains the use of nesting of functions.
13. Write a function **power** that computes x raised to the power y for integers x and y and return Double-type value.
14. Define a structure type struct personal that would contain person name, date of joining and salary using this structure to read this information of 5 people and print the same on screen.
15. Design a structure student\_record to contain name, branch and total marks obtained. Develop a program to read data for 10 students in a class and print them.
16. Write a program using structure within structure.
17. Define a structure called cricket that will describe the following information  
Player name, Team name, Runs  
Using cricket, declare an array player with 10 elements and write a program to read the information about all 10 players and print a team-wise list containing names of players with their runs.
18. In a program declare following structure member: name, code, age, weight and height. Read all members of the structure for 10 persons and find list of persons with all related data whose weight > 50 and height > 40 and print the same with suitable format and title.
19. Write a program to print the value and address of the element.
20. Write a program to accept 10 numbers and display its sum using pointer.
21. Write a program to accept 10 numbers and sort them with use of pointer.
22. Write a program to swap the two values using pointers and UDF.

23. Write a program with structure and pointer.
24. Write a program using pointer to determine the length of a character string.
25. Write a program using pointers to read an array of integers and print its elements in reverse order.
26. Write a program using UDF and pointers to add two matrices and to return the resultant matrix to the calling function.
27. Create one text file store some information into it and print the same information on Terminal.
28. A file named data contains series of integer no. Write a c program to read that no. and then Write all odd no into file named odd no. and write all even no into file named even no. Display all the contents of these file on screen.
29. Write a c program to read data from keyboard, write it to a file called input and Display data of input file on the screen.
30. Write a program that counts the number of characters and number of lines in a file.
31. Write a c program to read mark data which contains roll no, name, sub1, sub2, sub3 file and Generate the annual examination results are tabulated as follows:

Result

```

-----
Roll no Name    Sub1 Sub2 Sub3 Total per%   Class
-----

```

32. Write a c program to input employee no, employee name and basic and to store output into empdata file in following format.

A/c Department

```

-----
Emp-No Name    Basic  DA  HRA  MA  PF  GROSS  NET-PAY
-----
1   xyz      5000 2500 500  100 500  8100   7600
2
3
-----

```

DA = 50% of Basic

HRA =10% of Basic

MA = 100

PF = 10% of Basic

GROSS = BASIC + DA + HRA + MA      NET-PAY = GROSS – PF

33. Write a c program to read empin data file which contains empno, empname and basic. To create empout data file as per practical no 23 format.
34. Write a program using fseek and ftell functions.
35. Two files DATA1 and DATA2 contain sorted lists of integers. Write a program to produce a third file DATA which holds a single sorted, merged list of these two lists. Use command line arguments to specify the file names.
36. Write a program to work as a dos copy con command using command line argument.
37. Write a C program to work as a dos type command using command line argument.
38. Write a C program to work as a dos copy command using command line argument.
39. Write programs which explain the use of memory allocation functions.
40. Write a program which explains the use of macro.

**Practical Exam Scheme:**

Program	Output	Viva	Journal	Total
25 Marks	15 Marks	20 Marks	10 Marks	70 Marks