SEMCOM
FYBCA (Semester – II)
Adv. C - Practical Assignment I

Part – 1 : Pointer

1. Write a C programme to declare an integer variable ‘a’, assign some value to that variable also declare a pointer variable ‘ptr’ to store the address of ‘a’. Assign address of ‘a’ to ‘ptr’ and also print value of ‘a’.

2. Write a C programme to declare a float variable ‘a’, assign some value to that variable also declare a pointer variable ‘ptr’ to store the address of ‘a’. Assign address of ‘a’ to ‘ptr’ and also print value of ‘a’.

3. Write a C programme to input two numbers from user and do arithmetic operations like (+, -, *, / , %) using pointer.

4. Write a C programme to declare two integer variable n1 & n2 also declare two pointer variable p1 & p2. Assign some value to n1 & n2 and also assign address of n1 to p1 and n2 to p2.

5. Write a C programme to declare two float variable n1 & n2 also declare two pointer variable p1 & p2. Assign some value to n1 & n2 and also assign address of n1 to p1 and n2 to p2.

6. Write a C programme to input an integer variable and print the value and address using pointer.

7. Write a C programme to declare two integer variable a & b also declare two pointer variable p1 & p2. Assign some value to a & b and also assign address of a to p1 and b to p2. Print value of a and b with normal method & through pointer.

8. Write a C programme to declare two integer variable a & b also declare two pointer variable p1 & p2. Assign some value to a & b and also assign address of a to p1 and b to p2. Print value of a and b with normal method & through pointer.

9. Write a C programme to input two integer variables n1 & n2, assign values to them. Declare two pointer variables p1 for n1 and p2 for n2. Then assign n1 to p2 and n2 to p1. Print values of n1 and n2 before and after the assignment.

10. Write a C programme using pointer to exchange the value stored in two location in the memory.

11. Write a C programme to calculate & print simple interest SI=(PRN)/100 with pointers.

12. Write a C programme to input two numbers find maximum number out of them using pointer. Display appropriate message.

13. Write a C programme to input two variables and check what is value of ‘x’ after one point.

14. Write a C programme to declare an integer variable and assign value to it. Store address of variable to pointer and increment it.

15. Write a C programme to declare a float variable and assign value to it. Store address of variable to pointer and increment it.

16. Write a C programme to declare an integer variable and assign value to it. Store address of variable to pointer and increment the variable through pointer.

17. Write a C programme using pointer to read an array of n element and print all the element of array.

18. Write a C programme using pointer to read an array of n element and print all the element of array in reverse order.

19. Write a C programme using pointer to reverse the given number.

20. Write a C programme to input n elements into 1-D array, print all elements of array and sum of the elements using pointer.

21. Write a C programme using pointer to read an array of n elements and print all elements of the array. Also find & print sum of odd and even elements of array.

22. Write a C programme using pointer input elements through array of float datatype.

23. Write a C programme to input two variables and multiply by 4 and sum with 10.

24. Write a C programme to using pointer to find whether given number is palindrome or not.(121=121)

25. Write a C programme using pointer to check whether the given number is amstrong or not.($153=(1)^3+(5)^3+(3)^3$)

26. Write a C programme to check the occurrence of the no. entered in the array elements.

27. Write a C programme to find maximum and minimum numbers from given array elements.

28. Write a UDF programme using pointers to find simple interest.

29. Write a UDF programme using pointers to find addition and difference between two numbers.

30. Write a UDF to swap values of two numbers using pointer.

31. Write a UDF to find total and percentage of the student using pointer.

32. Write a UDF to calculate DA and HRA of employee using pointer. DA=60% of basic salary, HRA=12% of basic salary

33. Write a C programme using UDF and pointer to find net salary and gross salary.
DA=70% of basic salary, HRA=12 % of basic salary, IT=8 % of basic salary, PF=Rs 200.

34. Write a C programme to input a string from user and use malloc or calloc and realloc to expand or to shrink the string.

Part -2 : Structure

35. Write a C programme to input roll no., marks of 3 subjects and name of student and find total and percentage of student using structure definition.

36. Write a C programme to input roll no., marks of 3 subjects and name of student and find total and percentage of student using structure definition for two students.

37. Write a C programme to read and display library data like title of book, author, pages and price.

38. Define a structure for simple interest which contains 3 members principle amount, rate of interest and no. of years. Calculate simple interest and display result.

39. Define a structure for simple interest which contains 4 members principle amount, rate of interest, simple interest and no. of years. Calculate simple interest and display result.

40. Write a C programme using array within structure to input marks of 6 subjects of a student.

41. Write a C programme using array within structure to input marks of 6 subjects of a student and check in how many subjects he/she failed. If mark is >= 35 then pass.

42. Write a C programme using structure having members like salesman no., name, sales amount for 6 months and commission. Input necessary data and calculate commission which is 15% of total sales amount.

43. Write a Program using structure having members like x and y. Find out Addition , Multiplication , Subtraction, Division for x and y. Take Data in different ways like:
1. Taking input from the user.
2. Initialize the value at time of declaration.
3. Assignment statement to assign the value.
4. Definition, Declaration, Assignment.

44. Write a program to read a roll no, name and marks of 9 subjects using array within structure and print the result with total and percentage.

45. Write a program using structure to read name, telephone number for the 10 persons using structure and display them.

46. Write a program to read personal information of 10 people like name, phone number and city name. Print the information for the people leaving in a specific city.

47. Write a program using structure to read name, telephone number for the 10 persons using structure and display them. Also input one telephone number from user. Search inputted number from the list. If found then display the name and number. If not found then display appropriate message.

48. Write a Program to read a roll no, name and marks of 9 subjects of n students using Array within Structure and Array of Structure. Print the result with total and percentage.

49. Write a C programme to read and display library data like title of book, author, pages, price and quantity for n books. Calculate total amount (quantity * price) for each book and display output along with all inputs in an attractive format.

50. Write a C programme to read and display salesman data like salesman number, salesman name and sales data for 6 months. Calculate total sale and commission (15% of total sales) for each salesman and display output along with all inputs in an attractive format.

51. Write a C program to define structure product with members – product number, product name and product price. Input and display data for structure variable using pointer.

52. Write a C program to define structure emp with members – employee number, employee name and salary. Input and display data for structure variable using pointer.

53. Write a C program to define structure product with members – product number, product name and product price. Declare array of structure product. Input and display data for array of structure using pointer.

54. Write a C program to define structure emp with members – employee number, employee name and salary. Declare array of structure emp. Input and display data for array of structure using pointer.

55. Define a structure with members roll number, name, marks of 3 subjects, total and percentage. Write a C program to read student information like roll number, name and marks of 3 subjects using structure. Calculate and print total and percentage using following methods.

1. Pass marks of 3 subjects to UDF : one UDF return total, another UDF will return percentage
2. Pass structure as an argument to user defined function and print the

data in UDF.
3. Pass address of structure as an argument to user defined function and print the data in calling function.

56. Define a structure with members like book number, book name, author name, number of pages, quantity, price, amount and discount. Write a C program to read book information like book number, book name, author name, number of pages, quantity and price using structure. Calculate and print amount and discount (15% of amount) using following methods.
1. Pass quantity and price to UDF : one UDF return amount, another UDF will return discount.
2. Pass structure as an argument to user defined function and print the data in UDF.
3. Pass address of structure as an argument to user defined function and print the data in calling function.

57. Define a structure with members like salesman number, salesman name, sales of 3 month, total and commission. Write a C program to read salesman information like salesman number, salesman name and sales of 3 month using structure. Calculate and print total and commission (7.5% of amount) using following methods.
1. Pass sales of 3 months to UDF : one UDF return total, another UDF will return commission.
2. Pass structure as an argument to user defined function and print the data in UDF.
3. Pass address of structure as an argument to user defined function and print the data in calling function.

58. Write a C program to read book information like roll number, name and marks of 3 subjects using structure. Pass structure as an argument to user defined function and print the data in UDF.