REVISED FIRST YEAR SYLLABUS 2020-21 Curriculum & Evaluation Scheme (I & II semester)

KCS-151P KCS-251P PROGRAMMING FOR PROBLEM SOLVING

0L:1T:2P 1 Credit KCS151P- Programming for Problem Solving Lab Course Outcome

(CO) Bloom's Knowledge Level (KL) At the end of course , the student will be able to: CO 1 Able to implement the algorithms and draw flowcharts for solving Mathematical and Engineering problems. K3, K4 CO 2 Demonstrate an understanding of computer programming language concepts. K3, K2 CO 3 Ability to design and develop Computer programs, analyzes, and interprets the concept of pointers, declarations, initialization, operations on pointers and their usage. K6, K4 CO 4 Able to define data types and use them in simple data processing applications also he/she must be able to use the concept of array of structures. K1, K5 CO 5 Develop confidence for self education and ability for life-long learning needed for Computer language. K3, K4

Lab No. Expt. Program LAB 1

1 Write a program to calculate the area of triangle using formula $at=\sqrt{s(sa)(s-b)(s-c)}$

2 Basic salary of an employee is input through the keyboard. The DA is 25% of the basic salary while the HRA is 15% of the basic salary. Provident Fund is deducted at the rate of 10% of the gross salary (BS+DA+HRA). Program to calculate the Net Salary.

3 Write a program to determine the roots of quadratic equation.

4 Write a program to find the largest of three numbers using nested if else.

5 Write a program to receive marks of physics, chemistry & maths from user & check its eligibility for course if a) Marks of physics > 40 b) Marks of chemistry > 50 c) Marks of math's > 60 d) Total of physics & math's marks > 150 or e) Total of three subjects marks > 200

Lab No. Expt. Program LAB 2

6 Write a program to find the value of y for a particular value of n. The a, x, b, n is input by user if n=1 $y=ax\%b$ if n=2 $y=ax2+b2$ if n=3 $y=a-bx$ if n=4 $y=a+x/b$

7 Write a program to construct a Fibonacci series upto n terms.

8 Write a program to find whether the number is Armstrong number.

9 Write a program to generate sum of series $1!+2!+3!+--------------n!$

10 Write a program to find the sum of following series $1-X1/1!+X2/2!- …………Xn/n!$.

Lab No. Expt. Program LAB 3

11 Write a program to print the entire prime no between 1 and 300.

12 Write a program to print out all the Armstrong number between 100 and 500.

13 Write a program to draw the following figure: 3 2 1 21 1 * ** ***

14 Write a program to receive a five-digit no and display as like 24689: 2 4 6 8 9

Lab No. Expt. Program LAB 4

15 Write a function that return sum of all the odd digits of a given positive no entered through keyboard.

16 Write a program to print area of rectangle using function & return its value to main function.

17 Write a program to calculate the factorial for given number using function.

18 Write a program to find sum of Fibonacci series using function.

19 Write factorial function & use the function to find the sum of series S=1!+2!+-----n!.

Lab No. Expt. Program LAB 5

20 Write a program to find the factorial of given number using recursion.

21 Write a program to find the sum of digits of a 5 digit number using recursion.

22 Write a program to calculate the GCD of given numbers using recursion.

23 Write a program to convert decimal number in to binary number.

24 Write a program to convert binary number in to decimal number.

Lab No. Expt. Program LAB 6

25 Write a program to delete duplicate element in a list of 10 elements & display it on screen.

26 Write a program to merge two sorted array & no element is repeated during merging.

27 Write a program to evaluate the addition of diagonal elements of two square matrixes.

28 Write a program to find the transpose of a given matrix & check whether it is symmetric or not.

29 Write a program to print the multiplication of two N*N (Square) matrix.

Lab No. Expt. Program LAB 7

30 Write a program in C to check whether the given string is a palindrome or not.

31 Write program to sort the array of character (String) in alphabetical order like STRING in GINRST. 32 Write a program to remove all the blank space from the string & print it, also count the no of characters.

33 Write a program to store the following string "zero", "one" -------"five". Print the no in words, given in figure as 3205.

Lab No. Expt. Program LAB 8

34 Write a program to compare two given dates. To store a date uses a structure that contains three members namely day, month and year. If the dates are equal then display message equal otherwise unequal.

35 Define a structure that can describe a hotel. It should have the member that includes the name, address, grade, room charge and number of rooms. Write a function to print out hotel of given grade in order of room charges.

36 Define a structure called cricket with player name, team name, batting average, for 50 players & 5 teams. Print team wise list contains names of player with their batting average.

Lab No. Expt. Program LAB 9

37 Write a c program to copy & count the character content of one file says a.txt to another file b.txt.

38 Write a program to take 10 integers from file and write square of these integer in other file.

39 Write a program to read number from file and then write all 'odd' number to file ODD.txt & all even to file EVEN.txt.

40 Write a program to print all the prime number, between 1 to 100 in file prime.txt.

41 Write the following C program using pointer: a) To sort the list of numbers through pointer b) To reverse the string through pointer.

Lab No. Expt. Program LAB 10

42 Write a program to find the largest no among 20 integers array using dynamic memory allocation. 43 Using Dynamic Memory Allocation, Write a program to find the transpose of given matrix.

44 Write a program to find the factorial of given number using command line argument.

45 Write a program to find the sum of digits of a 5 digit number using command line argument.