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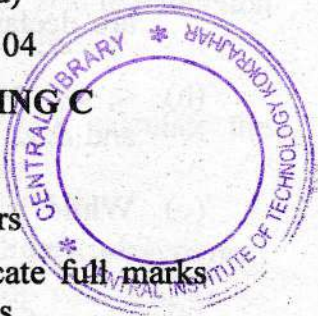
RETEST EXAMINATION – 2019
Semester : 3rd (Old)
Subject Code : CO-304
PROGRAMMING USING C

Full Marks – 70

Time – Three hours

The figures in the margin indicate full marks for the questions.

Instructions :

1. Questions on SECTION – A are compulsory.

2. Answer any *five* questions from SECTION – B.

SECTION – A

Marks – 25

1. Answer in brief :   5×1=5

    (a) Compare the escape sequence : \t and \n.

    (b) Compare %d and %f.

    (c) What is the meaning of putting a data-type in front of a function like main( ) ?

    (d) What is the meaning of return( ) function ?

    (e) What is user defined data-type ?

[Turn over

2. Fill up the blanks :   10×1=10

(a) The variables which can be accessed from any function are called _____ variable and can be accessed only from the function where they are declared are called _____ variable.

(b) <, <=, >, >= are called _____ operator and &&, ||, ! are called _____ operator.

(c) **While** is called _____ control loop and **do...while** is called _____ control loop.

(d) Size of int type is _____ and char type is _____ in byte.

(e) The header file for getch() is _____ and for printf() is _____ .

3. Write true or false :   10×1=10

(a) Array index in C language starts from 1.

(b) One **if** statement written within the body of another **if** statement is called **nested if.**

(c) Escape sequence \b stands for bold.

(d) A single pointer variable holds the address of another memory variable.

(e) A double pointer variable holds the address of another single pointer variable.

(f) The strlen() function takes **string** argument and produce **a string** as a result.

(g) The & symbol used with scanf() function indicates the memory address.

(h) malloc() function is used to calculate the required memory locations.

(i) If we do not provide the increment/decrement part in a loop then the loop will become an infinite loop.

(j) FILE is a data-type in C which is used to declare certain file operations.

SECTION – B

Marks – 45

4. (a) Compare **while** and **do...while** statement in C.   3

(b) Define a nested for loop statement with the help of an example.   3

(c) Compare structure and union.   3

5. (a) Describe the use of switch statement with the help of an example. 3

(b) Write a C program to read age of 30 persons in an array. Count the number of persons falling in the age group :

Up to 16 years,

Between 17 and 23 years,

24 and above 6

6. (a) Write a C program to read a number and find the sum of individual digits of the number. 5

(b) Write a C program to read a positive number, find factorial of it. 4

7. (a) Define an array. 2

(b) Describe how data files are managed in C. 3

(c) Write a C program to read base and exponent and find power. 4

8. (a) Explain the library functions available in string.h header file : 3×2=6

(i) strcat( )

(ii) strcpy

(iii) strcmp( )

(b) Compare single and double pointer with the help of an example. 3

9. Write a C program to create a structure for keeping the following data : 6+3=9

eNo, eName, basicPay, grossPay

Enter data in all the fields except grossPay.

Calculate grossPay as follows :

grossPay = basicPay + da + hra

Here da = **39% of basicPay and hra=15% of basic Pay** subject to maximum Rs. 6000.00 per month. Write code to enter 4 such records and also display them.
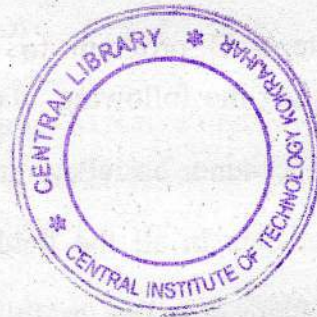
Store the result in a data file "result.txt".

10. Write short notes on any *three* :   3×3=9

    (a) Functions in C

    (b) Data-types in C

    (c) Sorting logic (any one)

    (d) Pointers in C.