Printed Pages : 4

CS201

(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 199239

Roll No.

B. Tech.

(SEM. IV) THEORY EXAMINATION, 2014-15

COMPUTER PROGRAMMING

Time : 3 Hours] [Total Marks : 100

Note : (1) Attempt all questions.

(2) Make suitable assumptions wherever necessary.

SECTION-A

1. Attempt all parts of this question. **2x10=20**

(a) Explain the functions of a linker.

(b) What is the role of curly braces ({}) in C program.

(c) What will be the output of the following program?

```
void main()
{
        int i=1, j=2, k=3;
        clrscr();
        printf("%d",!((j+k)>(i+5) ) );
}
```

(d) What is sizeof () operator? Explain with suitable example.

(e) Differentiate between "%f"and"%g".

(f) What are the limitations of switch () case statement?

(g) Why does element counting of arrays always start from '0'?

(h) Name the types of storage classes.

(i) What do you mean by system software?

(j) Differentiate between sequential search and binary search.

SECTION-B

2. Attempt any three of the following. 10×3=30

(a) (i) What is a flow chart? Draw the flow chart for finding the greatest element in an array.

(ii) Convert the following;

1) $(1100101)_2 = ()_{10}$
2) $(A2F)_{16} = ()_2$
3) $(23.72)_{10} = ()_2$
4) $(264)_8 = ()_2$
5) $(231)_4 = ()_2$

(b) What are the nested loops in C? Write a program in C to find the perfect cubes up to given number. As 18,27,64 are perfect cubes of 1,2,3,4, respectively.

(c) What is a pointer? Write the advantages and disadvantages of it. Explain with suitable example how pointers are declared in C programming.

(d) How are the multidimensional arrays declared in C programming? Write a program in C to multiply two m×n matrices.

(e) What are the different loop statements supported by C language? Write a program in C to generate the following pattern using for loop and while loop.

1
1 2
1 2 3
1 2 3 4

SECTION-C

3 Attempt any two of the following. **2x5=10**

(a) What is digital computer ? How is it different from analog computer ? Classify the various digital computers.

(b) Differentiate between:

(i) SRAM and DRAM

(ii) CD-R and CD-RW

(c) What are the various approaches to problem solving? Explain any one of them.

4 Attempt any two of the following. **2x5=10**

(a) Explain comma and conditional operator in C language with suitable examples.

(b) Name different categories of constants in C language.

(c) Write a program in C to check whether a given string is palindrome or not?

5 Attempt any two of the following. **2x5=10**

(a) Define the structure and union in C. List the advantages and disadvantages of each.

(b) Discuss the various parameters passing mechanism used in function in C language.

(c) What is a string? Write a function in C to find the length of string without using strlen().

6 Attempt any one of the following. **1x10=10**

(a) What types of files can be created in C for storing the data? Write a program in C to create and then store the first 30 odd integers in it.

(b) What are array of pointers? How they are declared and initialised? Using pointers write a program to read and display list of names of students.

7 Write short notes on any two of the following. **2x5=10**

(a) Operating system

(b) Defining and calling macros with proper example.

(c) Global variables