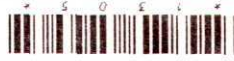


PAPER ID : 1305

TCS-101

Printed Pages : 3



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

Roll No.

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B. Tech.

(SEM. I) (ODD SEM.) (REG. & BACK) EXAMINATION, 2012-13

**FUNDAMENTAL OF COMPUTER
PROGRAMMING**

Time : 3 Hours]

[Total Marks : 100

UNIT - I

I Do Any Four :

4×5=20

- (a) What is computer? Explain some of the important characteristics of a computer.
- (b) List the important output devices used with digital computers with their distinct features.
- (c) What different types of memories are used in computers? Describe their features, advantages and disadvantages.
- (d) Differentiate between application software and system software.
- (e) What is meant by base of a number system? Find out the decimal equivalent of following binary numbers:
 - (i) 11100.11
 - (ii) 100.1011.
- (f) Find the decimal equivalent of the following:
 - (i) $(11572.14)_8$
 - (ii) $(428.10AB)_{16}$

UNIT - II

- 2 Do Any **two** :
- (a) Explain different phases in program development process with example also differentiate between top down and bottom up development strategy. **10**
 - (b) What is flowchart? List the flowchart rules. Draw a flowchart for printing the fibonacci terms up to specific limit. **10**
 - (c) What is an algorithm? Explain its need. Write an algorithm for subtraction of two metrics. **10**

UNIT - III

- 3 Do any **two** :
- (a) (i) What do you understand by user defined data types ? What are the advantages of it ? How can you create user defined data types in C ? Explain using example. **5×2=10**
 - (ii) What is difference between character constant and string constant? Does string constant represent numeric values? **5×2=10**
 - (b) (i) Explain the difference between do while and while loop with example. **5×2=10**
 - (ii) Write a program in C to generate the pattern given below:
- | | | | | |
|---|---|---|---|---|
| 1 | | | | |
| 1 | 2 | | | |
| 1 | 2 | 3 | | |
| 1 | 2 | 3 | 4 | |
| 1 | 2 | 3 | 4 | 5 |
- (c) (i) Distinguish between formal and actual parameter with example. **5×2=10**
 - (ii) Write a program to find the sum of digits in a given integer number *n*.

13051

UNIT - IV

- 4 Do any **two** :
- (a) Distinguish between an array and a structure, give an example. How a string is stored in C? Write a C program to compare two structure variables of same type. **10**
 - (b) Explain why array are used in programming and give the syntax of accessing the elements of array in C. Write a program in C to find the length of a string using pointers. **10**
 - (c) What is NULL character and what is its use in the context of string? Write a program to find the multiplication of two matrices. **10**

UNIT - V

- 5 Do any **two** :
- (a) What is pointer? Discuss the application of pointers and list the disadvantages of them. Write a program in C to find the length of a string using pointers. **10**
 - (b) How pointer is initialized? In what way can the assignment of an initial value be included in the declaration of a pointer variable? Write a C program to find the average of elements of an array using pointers. **10**
 - (c) Explain the following with examples : **5×2=10**
- | | |
|-----|----------------------------|
| (a) | fseek |
| (b) | fread |
| (c) | fprintf() |
| (d) | fscanf() |
| (e) | Dynamic memory allocation. |

13051