D 32491 **(Pages : 2)** **Name.....**

Reg. No.....

FIRST SEMESTER B.C.A. DEGREE EXAMINATION, JANUARY 2013

(CCSS)

CA 1B 01—COMPUTER FUNDAMENTALS AND PROGRAMMING IN C

Time : Three Hours Maximum : 30 Weightage

Section A

Answer **all** *questions.*
Each question caries ¼ weightage.

1. $(453.21)_{10}$ = (
2. $(ABCD)_{16}$ = ( ) 2.
3. Expand CPU.
4. What is ROM ?
5. What is DMA?
6. Give an example for system software.
7. Which C statement is used to skip a part of the statements in a loop ?
8. What is the range of *char* data type in a compiler in which size of *char* is one byte ?
9. Write down the function name which frees previously allocated memory space in C.
10. Write down the correct output of the following code :

```
int z, x = 5, y = —10, a = 4, b = 2;
z = x ++ ...y* b I a;
```

11. Which C built-in function is used for moving the file pointer position to the beginning of the file ?
12. Write down the C statement for declaring a matrix of size 5 x 5.

(12 x ¼ = 3 weightage)

Section B

Answer **all** *questions.*
Each question carries 1 weightage.

13. What are the characteristics of Assembly language ?
14. List any *four* addressing modes.
15. Distinguish between *break* **and** *continue.*
16. Explain the scope of local variables in C.
17. Explain the use of ***fgets*** **( ) function.**

Turn over

18. What is recursion ?
19. What is the advantage of using union over structure data type in C ?
20. Differentiate static and register variables.
21. List any *four* string handling functions in C.

(9 x 1 = 9 weightage)

Section C

Answer any **five** *questions.*
Each question carries 2 *weightage.*

22. Explain the memory hierarchy.
23. Explain the different schemes for negative number representation.
24. Discuss the different data transmission modes.
25. Explain the function and syntax of *do ... while* construct.
26. Write a C program to add two strings without using string handling functions.
27. What are command line arguments ? Explain with an example.
28. Write a short note on preprocessors.

(5 x 2 = 10 weightage)

Section D

Answer any **two.** *questions.*
Each question carries 2 *weightage.*

29. Explain the function and organization of CPU.
30. Write a C program to compute x^x where x is an integer number accepted as input.
31. What is user defined function ? Explain its different category using suitable examples.

(2 x 4 = 8 weightage)