

FIRST SEMESTER BSc. DEGREE EXAMINATION, JULY 2013

(CCSS)

BCA

CA 1B 01—COMPUTER FUNDAMENTALS AND PROGRAMMING IN C

Time : Three Hours

Maximum : 30 Weightage

Section A

*Answer all questions.
Each question carries $\frac{1}{4}$ weightage*

1. What is the binary equivalent of $(100.50)_{10}$.
2. Find the 2's complement of $(10101011)_2$.
3. What is ROM ?
4. Expand DVD.
5. Give an example for system software.
6. What is ALU ?
7. Explain the use of ternary operator in C.
8. Which C statement is used to skip a part of the statements in a loop ?
9. Write down the function name which frees previously allocated memory space in C ?
10. What will be output of following program ?

```
int main()  
{  
    int i = 3;  
    int *j;  
    int **k;  
    j=&i;  
    k=&j;  
    printf("%u%u%u",i,*j,**k);  
    return 0;  
}
```

11. Which C built-in function is used for moving the file pointer position to the beginning of the file ?
12. List any four logical operators in C.

(12 x $\frac{1}{4}$ = 3 weightage)

Turn over

Section B

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

13. Differentiate compiler and interpreter.
14. Distinguish between static and dynamic memory.
15. Explain cache memory.
16. Explain `getchar()` and `gets()` functions.
17. Explain recursion.
18. What is the use of `enum` data type in C ?
19. Explain the syntax of `malloc()` function in C.
20. Define `union`.
21. What do you mean by conditional compilation ?

(9 x 1 = 9 weightage)

Section C

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

22. Explain the working of hard disk.
23. Explain the different schemes for negative number representation.
24. Write a note on DMA.
25. Explain the function and syntax of `switch` statement.
26. Write a program to read a number and print it on reverse order.
27. Explain storage class using suitable example.
28. Write a note on macros.

(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 program to read two matrices of suitable order and perform the multiplication operation on those matrices.
- 31.. Explain the different categories of user defined functions with suitable examples.

(2 x 4 = 8 weightage)