

**D 92846**

**(Pages : 2)**

**Name.....**

**Reg. No.....**

**FIRST SEMESTER B.C.A. DEGREE EXAMINATION, NOVEMBER 2015**

**(CUCBCSS—UG)**

Core Course

**BCA 1B 01—PROBLEM SOLVING USING C**

Time : Three Hours

Maximum : 80 Marks

**Part A**

*Answer all questions.*

*Each question carries 1 mark.*

1. \_\_\_\_\_ are needed to translate source code into machine code.
2. \_\_\_\_\_ is the process of finding and correcting errors in a program.
3. The escape sequence \_\_\_\_\_ represents the new line character.
4. What will be the output of the following `printf` statement ?  
`printf("%d",10<<2);`
5. \_\_\_\_\_ loop is an example of entry controlled loop.
6. \_\_\_\_\_ statement is used to return the execution control to parent function from a sub procedure.
7. Collection of characters are known as \_\_\_\_\_
- 8, A \_\_\_\_\_ is a named block of statements which is used to perform a specific task.
9. In the following statements assume that the initial value of `p` is **3000** then **what** will be the value of `p` after executing the increment statement ?  
`float *p;`  
`p++;`
10. The \_\_\_\_\_ function is used to read an integer from a file.

**(10.x 1 = 10 marks)**

**Part B**

*Answer all questions.*

*Each question carries 2 marks.*

11. What do you mean by top down design ?
12. Write short note on conditional operator.
13. Write short note on `goto` statement.

**Turn over**

14. What is the importance of bit fields in programming ?
15. What is the importance of `fclose( )` function in file operations ?

(5 x 2 = 10 marks)

### Part C

*Answer any **five** questions.  
Each question carries **4** marks.*

16. Distinguish between interpreter and compiler.
17. Write short note on the structure of a C program.
18. What do you mean by variable ? How to declare and initialize it ?
19. Write short note on shift operators used in C.
20. What do you mean by nested if statements ? Explain with example.
21. Explain local and global variable with example.
22. Write short note on `malloc( )` and `calloc( )` functions.
23. What is a macro ? What are the advantages of using macro definitions in a program ?

(5 x 4 = 20 marks)

### Part D

*Answer any **five** questions.  
Each question carries **8** marks.*

24. Explain the role of algorithms in problem solving? Write an algorithm to generate prime numbers below a given number.
25. Explain data types used in C.
26. Explain any eight binary operators used in C with example.
27. Write a C program to generate Fibonacci series.
28. Explain any four string handling functions with example.
29. Write a C program to check the given square matrix is symmetric or not.
30. Write a C program to count number of characters, words and lines in a file.
31. Explain different file modes in C.

(5 x 8 = 40 marks)