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(Pages : 2)

Name...................................... 3C

Reg. No..............................

FIRST SEMESTER B.C.A. DEGREE EXAMINATION
JANUARY 2014

(UG–CCSS)

Core Course

CA 1B 01 – COMPUTER FUNDAMENTALS AND PROGRAMMING IN C

Time : Three Hours   Maximum : 30 Weightage

I. Answer *all* questions :

1. The maximum integer value which can be represented using n bits is _____.

2. The _____ generation of computers had transistors as building blocks.

3. The terms Hit and Miss are related to _____ memory.

4. In the signed magnitude representation of numbers, _____ bit is used to represent the sign.

5. The equivalent representation for p + = 1 using increment operator is _____.

6. The control string used to read in an unsigned decimal integer is _____.

7. The clrscr ( ) function is a component of _____ header file.

8. _____ is an example for unconditional branching statement of C.

9. An array of characters is popularly known as a _____ in C.

10. The syntax for declaring a pointer 'p', to a character variable is _____.

11. The operator used to perform one's complement in bitwise operation is _____.

12. The use of malloc ( ) and calloc ( ) helps in allocating memory at _____ time.

(12 × ¼ = 3 weightage)

II. Answer *all* questions :

13. Explain the importance of program counter and instruction register in execution of programs.

14. Explain the significance of complements in binary number system.

15. What do you mean by EPROM? Explain its use.

16. Explain the use of Size of ( ) operator in C.

17. What is Type Casting explain its importance in C?

Turn over

18. Explain the general syntax of one dimensional array declaration.

19. Explain the use of storage class 'register' in C.

20. Explain the use of * and & in using pointers.

21. Explain the syntax and working of strcat ( ) function with example.

$(9 \times 1 = 9 \text{ weigh}$

III. Answer any *five* questions :

22. Compare and contradict the working of compilers and interpreters.

23. Perform the subtraction using one's and two's complement method and verify answer $(32)_{10} - (17)_{10}$.

24. Explain nested loops. How does the break statement affect the working of nested loops

25. Explain variant forms of if statements in C.

26. Write a C program to find the average of 10 given integers.

27. Write a C program using concept of functions and call by value method to find the dist between two points, given their co-ordinates.

28. What do you mean by files? Explain the syntax of declaration and different modes of ope a file.

$(5 \times 2 = 10 \text{ weight}$

IV. Answer any *two* full questions :

29. (a) Explain the working of hard disks and optical storage devices in storing informati

    (b) Explain the concept and importance of Direct Memory Access.

30. Write a C program using the concept of functions to multiply two given matrices, after chec whether multiplication is possible.

31. Explain the concept of array of structures. Write a C program to find the average mark obta by each student, given the marks in three subjects for a group of 10 students.

$(2 \times 4 = 8 \text{ weight}$