

(6 pages)

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B.C.A. DEGREE EXAMINATION, NOVEMBER 2012.

First Semester

Computer Applications

Paper I – PROGRAMMING IN C

(For those who joined in July 2012 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer

1. Integer division in a 'C' program results in _____.
(a) truncation (b) rounding
(c) overflow (d) none of the above
2. Which of the following cannot be used for declaring integer type variables?
(a) int (b) short int
(c) long int (d) double int

3. Recursive functions are executed in a _____.
(a) last in first out order
(b) first in first out order
(c) parallel fashion
(d) none of the above
4. It is necessary to declare the type of a function in the calling program if the function _____.
(a) returns an integer
(b) returns a non-integer value.obj
(c) is not defined in the same file
(d) none of the above
5. Which of the following multi-dimensional array declaration is correct for realizing a 2×3 matrix in C language?
(a) int m[2][3] (b) int m[2,3]
(c) int m[3],m[2] (d) none of the above
6. If an array is used as a function argument, the array is passed.
(a) by value (b) by reference
(c) both (a) and (b) (d) none of the above

7. The library function used to find the last occurrence of a character in a string is _____.

- (a) strnstr() (b) laststr()
(c) strrchr() (d) strstr()

8. The library function used to find the first occurrence of a given string in another string is _____.

- (a) strnstr() (b) firststr()
(c) strchr() (d) strstr()

9. Which of the following expression in C is used for accessing the address of a variable a?

- (a) &a (b) *a
(c) &&a (d) ***a

10. In 'C' language a pointer to an integer can be created by the declaration _____.

- (a) int a* (b) int *a
(c) int&a (d) int \$a

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

11. (a) List the conventions and rules for using variables in 'C' language. Give examples.

Or

- (b) What are the different ways variables can be declared in 'C' language? Explain with examples.

12. (a) Write a 'C' program to find the greatest of three numbers and print the result.

Or

- (b) Write a 'C' program to exchange the values of two variables.

13. (a) Write a 'C' program to store 'N' numbers in array and print the even numbers with array location.

Or

- (b) Write a 'C' program to find the greatest of 'N' numbers stored in an array and print the result.

14. (a) Explain with an example how gets() differs from scanf().

Or

- (b) Write a 'C' program to check whether a given string is a palindrome or not and print the result.
15. (a) Explain the different ways of declaring and initializing a pointer with examples.
- Or
- (b) What is array of pointers? Explain with an example.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

16. (a) What is an operator? Explain the types of operators in 'C' language with examples.
- Or
- (b) Explain the input and output statements in 'C' language with examples.
17. (a) Explain entry controlled loop and exit controlled loop with examples.

Or

- (b) List and discuss the different storage classes in 'C' language.

18. (a) Write a 'C' program to find the transpose of a given matrix and print the result.

Or

- (b) Write a 'C' program to sort 'N' numbers in descending order and print the result.
19. (a) List and explain any four string manipulation functions in 'C' language with examples.

Or

- (b) Write a 'C' program to print the number of vowels in a given paragraph.
20. (a) Write a 'C' program using pointers to sort an array of 'N' names and print the result.

Or

- (b) How can a function return a pointer to its calling routine? Explain with an example.