

Roll No.

BCA-204(O)

B. C. A. (Second Semester)
EXAMINATION, May, 2013

(Old Course)

Paper Fourth

COMPUTER PROGRAMMING USING C

Time : Three Hours]

[Maximum Marks : 75

Note : Section A is compulsory and carries 10 marks each.
Attempt any *eight* questions from Section B that carries
5 marks and any *one* question from Section C of 15
marks.

Section - A

10 each

1. Input a three digit number. Now write a 'C' Program to create the largest and the smallest numbers from the digits of the inputted number. Also check if the inputted number is same as the smallest or the largest number.
2. Write a 'C' program to determine the nature of the roots (i. e., real, imaginary, equal etc.) of a quadratic equation :

$$ax^2 + bx + c = 0$$

Section - B

5 each

3. What are storage classes ? What is the purpose of them ? Explain each of them in detail.
4. Consider the series :

$$1 + x^2 + x^3 + \dots + x^n$$
 Now write a 'C' program to read the values of x and evaluate the sum of series.
5. Giving suitable example, explain bitwise operators.
6. Differentiate between the following :
 - (i) Formatted and unformatted I/O statements
 - (ii) scanf () and gets () with reference to string input
7. Write a 'C' program to count the number of vowels and consonants in the sentence "A quick brown fox".
8. Discuss the major advantages and limitations of 'C' language.
9. Differentiate between the following :
 - (i) Arguments and parameters
 - (ii) Local and global variables
10. Write a 'C' program to find out whether any particular integer value is present in an array or not.
11. What are structures ? How do you access the members of a structure ? What is the need of an array of structures ?
12. Illustrate the difference between break and continue statements giving example.
13. What do you understand by pointers ? What role does pointer play in 'C' language ?

Section - C

15 each

14. Write a 'C' program to calculate the sum of diagonal elements of a square matrix.
15. Write a 'C' program which creates an array of structures for recording the following data for five books :
 - (i) Title
 - (ii) Author Name
 - (iii) Publisher
 - (a) Name
 - (b) Address
 - (iv) Cost
 - (v) Edition
16. (i) How will you define an array x [10] [10] of integers using pointers ?
 (ii) An array has been declared as float *j; how will you refer to the contents of its 4th element ?
 (iii) If x [10] is an array of integer elements then what will x + + signify ?