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DS – 1545

I Semester B.C.A. Examination, Nov./Dec. 2009
(Y2K7 Scheme)
COMPUTER SCIENCE
BCA 104 : Programming Concepts Using C

Time : 3 Hours   Max. Marks : 80

Instruction : All Sections are compulsory.

SECTION – A

Answer **any eight** questions :   (8×3=24)

1. What are the rules for writing a flow chart ? Give the advantages and disadvantages of a flow chart.

2. What are the rules for naming a variable ? Illustrate with an example each.

3. Give the format specifies for printf( ) for different data types.

4. Briefly explain the else-if ladder.

5. What are the advantages of a while( ) loop ?

6. What are subscripted variables and what is their usage ?

7. Give the different methods of outputting strings with examples.

8. What are formal and actual parameters ?

9. Explain any 3 bitwise operators in C.

10. What is a pointer ? What is the difference between a normal variable and a pointer variable ?

SECTION – B

Answer **any four** questions :   (4×14=56)

1. a) Explain the different storage classes in C with examples.   **10**

   b) Write a C program to find the largest of two numbers using ternary operator. **4**

2. a) Explain switch statement with an example.   **6**

   b) Write a C program to input day number (1-7) and output the day of the week. Use switch statement. **8**

3. a) Explain the working of nested for ( ) loops. Illustrate with an example.   **8**

   b) Write a C program to compute all prime numbers between m and n (m < n).   **6**

4. a) Explain any one sorting technique with a suitable example.   **7**

   b) Write a C program to read a square matrix and find the trace and norm of the matrix. (Trace is the sum of the diagonal elements. Norm is square root of the sum of the squares of the elements). **7**

5. a) Discuss the different categories of user-defined functions. Illustrate with examples. **9**

   b) Write a C program to find the sum of first n natural numbers. Use a recursive function to compute the sum. **5**

6. a) Explain what is a macro with an example. Differentiate between macros and functions. **6**

   b) Write a C program to reverse a string using pointers.   **8**

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