

# END-TERM EXAMINATION

FIRST SEMESTER [BCA] – DECEMBER 2005

Paper Code: BCA105

Subject: Programming with C

Time : 3 Hours

(Batch - 2005)

Maximum Marks : 75

Note: Attempt all questions.

- 7  
6  
13
- Q.1
- (a) ✓ Explain difference between break and continue statement with the help of example. 3
  - (b) ✓ Give syntax of switch statement in C. 3
  - (c) ✓ Give the difference between automatic and external variables. 3
  - (d) How we define two-dimensional array in C using pointer? What is advantage of this definition over normal method of defining two-dimensional array? 4
  - (e) Explain the difference between structure and union with the help of examples. 4
  - (f) Explain with the help of commands the different modes in which files can be opened in C language. 4
  - (g) ✓ Give syntax of one function each from the following standard libraries. 4
    - (i) stdio.h
    - (ii) stdlib.h
    - (iii) math.h
    - (iv) process.h

## UNIT-I

- Q.2
- (a) Construct a table of all operators (arithmetic, unary, relational, logical, etc.) in C language in decreasing order of precedence and also indicate their associativity. 6.5
  - (b) Write a C program to count number of characters and words in a line. 6
- OR
- (a) ✓ Give the syntax of while, do-while and for loop statement in C and also explain with the help of example that do-while and for loop statement can be replaced by while loop statement. 6.5
  - (b) ✓ Write a C program for sorting an array of n numbers in increasing order of their value. 6

## UNIT-II

- Q.3 (a) Write C function for calculating factorial of a number both iteratively as well as recursively. 6
- (b) Write a C function void itpa(int n, char SI[]), which converts integer n to string S. 6.5

OR

- (a) Write a C function for swapping to integer, when these integers has to be passed as parameters to this function. Explain the parameter passing method required to be used for this function. 6
- (b) Write a C function int atoi (char S[]), which converts string S to integer and return its value. 6.5

## UNIT-III

- Q.4 Write a complete C program which reads the students records (consisting of roll no., name, and marks) from a file and print them in the decreasing order of their marks. 12.5

OR

Write a complete C program which takes form the keyboard the employees records (consisting of employee id, name, salary) and store these records in a file in decreasing order of their salary. 12.5

## UNIT-IV

- Q.5 Write source code for following C standard library functions. 12.5
- (a) char \* strcpy(s,c+), copy string C+ to string S, including '\0'; return S.
- (b) char \* strcat(s,c+) concatenate string C+ to end of string S; return S.
- (c) int strcmp(Cs, C+) compare lexicographically string Cs to string C+; return < 0 if CS < C+, 0 if CS == C+, or >0 if CS > C+.

OR

Write source code for following C functions: - 12.5

- (a) Double atof (const char \* S) converts S to double.
- (b) Void ftoa (double x, char \* S) converts double x to string S.