END-TERM EXAMINATION

FIRST SEMESTER [BCA] DECEMBER-2007

Paper Code: BCA-105	Subject: Programming with C
Paper Id-20105	Batch: (2005-2007)
Time: 3 Hours	Maximum Marks: 75

Note: Attempt all questions. Internal choice is indicated.

Q.1 (a) Describe the purpose of the qualities const and volatile. (3)
(b) What do you mean by casting a value? (3)
(c) Write six mathematical functions. (3)
(d) How strings are printed? Explain briefly with examples. (4)
(e) In what ways does a switch statement differ from an if statement? (4)
(f) Differentiate between structure and union with suitable examples. (4)
(g) Write syntax of two functions each from the following standard libraries: (4)
(i) process.h
(ii) stdlib.h

UNIT-I

Q.2 Explain various looping constructs of C with suitable code segments and their relative merits and demerits. (12.5)

OR

Describe the following operators with C code (12.5)
(i) Conditional operator
(ii) Bitwise operators
(iii) Comma operator

UNIT-II

Q.3 (a) Differentiate call by value and call by reference mechanism. Write a swap function to inter change the value of two integers. (6.5)

(b) What do you mean by Pointers to function? Write C code to calculate $\sum_{i=1}^{n} x^2$ (i.e. $1^2 + 2^2 + ---- n^2$). (6)

OR

(a) What are the various storage classes? Illustrate the use of REG class. (6.5)
(b) Write down a C program using pointers to compute the sum of all elements stored in an array. (6)

UNIT-III

Q.4 Explain the following with C code segments: (12.5)
(i) Structures within structures and self referential structure
(ii) Arrays within structures
(ii) Structures as function parameters

OR

Write a complete C program which takes from the keyboard the student records (consisting of roll no., name, class, percentage of marks) and store these records in a file in decreasing order of then percentage of marks.

UNIT-IV

Q.5 Write a complete C program which displays the use of two functions each from the following standard libraries: - (12.5)
(i) string.h
(ii) math.h
(iii) ctype.h = malloc., m
(iv) process.h

OR

What is a File pointer? Write a program to copy the contents of one file into another.