

BTS (C) – I&II – 08 – 036 – B

**B. Tech Degree I & II Semester (Combined) Examination
June 2008**

**IT/CS/EC/CE/ME/SE/EB/EE/FT 108
COMPUTER PROGRAMMING
(2006 Scheme)**

Time : 3 Hours

Maximum Marks : 100

PART A

(Answer ALL questions)

(All questions carry EQUAL marks)

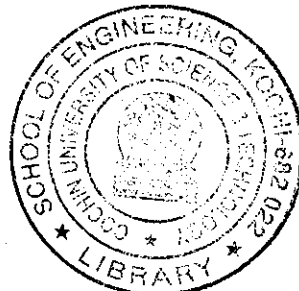
(8 x 5 = 40)

- I. (a) List out *five* rules for naming variables.
(b) Give the syntax of scanf statement and list out *any four* format specifiers.
(c) List out *any five* system defined/Library functions.
(d) Define actual and formal parameters, with examples. What are the *three* rules to be followed related to these arguments when a function call is made.
(e) Give syntax of a structure. When do we use structures? Give example. What are the methods to create structure variables?
(f) Declare a 1 – Dimensional (1 – D) array of size 100, to store integers. If the starting location of the array is 3000, what is the address of the 13th element. Give a generalized formula.
(g) What are pointers? Explain with example. How are pointers linked with arrays?
(h) Write short notes on :
(i) type def (ii) enum

PART B

- II. List out *four* categories of operators in C, with the list of *five* operators in each category. Give the order of evaluation of the operators in tabular format. (15)
OR
III. Write a C program to find the prime numbers between 1 and 100. (15)
[Give logic and example]
IV. (a) Write a C program to find sum of integers 1, 2, ..., n using recursion. [Give logic and example]. (10)
(b) List the scope, visibility, storage area, initial value and life time of register and auto storage class in tabular format. (5)

OR



(Turn Over)

- V. (a) Explain :
 (i) Parameter passing by value
 (ii) Parameter passing by reference. (8)
- (b) Write a function "Large" in C to find the largest of n numbers, which receives an array of numbers and number of numbers as parameters. [Only program needed] (7)
- VI. (a) Write C program to do selection sort such that if no swapping happens in a pass, sorting stops [Only program needed]. (8)
- (b) Write C program to initialize the upper triangular elements of a matrix with zero [Only program needed]. (5)
- (c) Why is union used? Give syntax. (2)
- OR**
- VII. Write a C program using structures to store student details like rollno, name, class, sex, mark1, mark2 and total. The total mark is the sum of mark1 and mark2 and is evaluated automatically. Search for those 'girl' students who have total > 75, assume mark1 and mark2 are in 50. [Give logic and example] (15)
- VIII. (a) Write a C program using command line arguments, to concatenate two strings "HELLO" and "WORLD" given at command line [Only program needed]. (10)
- (b) How does the execution of programs involving command line arguments differ from other programs? (2)
- (c) Explain what is the function of #include directive. (3)
- OR**
- IX. (a) What are pointers to structures? Explain with example. (3)
- (b) Explain *any two* preprocessor directive. (7)
- (c) What are pointers to functions, explain with example? (5)
