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B. Tech. 2nd Semester Examination, May-2013

**FUNDAMENTAL OF COMPUTER AND
PROGRAMMING IN C**

Paper-CSE-101-F

Time allowed : 3 hours]

[Maximum marks : 100

Note : Attempt five questions in all. Question No. 1 is compulsory and attempt one question from each section.

1. (a) Differentiate Volatile and Non-Volatile memory.
- (b) Differentiate between Multiprogramming operating system and Multitasking operating system.
- (c) Explain ternary operator in C by providing suitable example.
- (d) Describe Hypertext and its usability.
- (e) How an array of structures initialized?
- (f) Declare a pointer to a function that accepts three integer arguments and returns a floating point quantity.
- (g) List various types of high level languages.
- (h) Compare while and do-loop.

8x2.5 = 20

Section-A

2. Explain the following:

- (a) Generation of microprocessors.
- (b) Functions of Operating System.
- (c) Working of Dot-Matrix Printers. 20

3. Explain the following:

- (a) Various input/output ports and connectors.
- (b) Classification of Operating Systems.
- (c) Working of Laser Printers. 20

Section-B

4. (a) Explain different types of programming language. How we can execute a program written in these languages? 10

(b) Explain TCP/IP reference model. 10

5. (a) Explain OSI reference model. 10

(b) Describe relationship between compiler, interpreter, loader and linker. 10

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Section-C

6. (a) Write a program in 'C' which generate every 3rd integer between 2 and 100 and calculate the sum of those integers that are evenly divisible by 5. 12
- (b) Differentiate between structure and union. Explain with example how members of structure and unions are accessed and processed. 8
7. (a) WAP in 'C' to find out the second smallest and second largest number in the list. 12
- (b) How structures within structures are implemented? How we can access the members of these structures ? 8

Section-D

8. Explain the following by giving suitable examples :
- (a) Array of pointers
 - (b) Functions returning pointers
 - (c) Malloc, Calloc and Realloc
 - (d) Command line arguments. 20

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9. (a) Write a program to count the number of words, characters and lines in a file. 10
- (b) WAP using function to clarify the concept of the two parameter passing methods : call by value and call by reference. 10