SARDAR PATEL UNIVERSITY

M.Sc.(Bioinformatics) I Semester Examination

PS01CMBI03 IT Fundamentals

Thursday, 6th December, 2012

Time : 10:30 a.m. to 1:30 p.m.

Total Marks : 70

Note : Answers to the two sections must be written in separate answer-sheets.

SECTION – I

1.(A) Draw the block diagram of a simple computer. Which buses are used to connect   5
various parts of a computer ? Explain the functions performed by the important
components of a computer.

(B) Explain : Pipeline machines.   5

(C) Explain how information storage is organized on a *hard disk*. What do you mean   5
by *seek time* and *rotational latency* ?

2.(A) Answer the following questions in brief (**ANY FIVE**) :   10

(i)   What are the octal and hexadecimal equivalent numbers of the binary
number $(111100111)_2$?

(ii)   Define : 1's complement and 2's complement of a given binary number.

(iii)   What is the main function of a CPU ? List the important components of
a CPU.

(iv)   Write the steps involved in instruction execution by a CPU.

(v)   Define : *character code*. What is ASCII ?

(vi)   Construct the Hamming code for the ASCII character 'B' considering
even parity.

(vii)   Distinguish between the primary and secondary memory.

(B) Explain (**ANY TWO**) :   10
(i)   Array processors,
(ii)   Compact Disks,
(iii)   Addressing techniques,
(iv)   Interrupts.

SECTION – II

3.(A) Fill in the blanks : **5**
    (i)   The address of the extreme left upper corner cell of the worksheet is _____.
    (ii) Excel displays the address of the active cell in the _____.
    (iii) A formula always begins with _____.
    (iv) =ABS(-17.55) displays _____.
    (v) =ROUND(32767,-2) displays _____.

(B) Differentiate between : **4**
    (i)   Function and Formula
    (ii) LEFT( ) and MID( )

(C) Explain different ways to change column width of a column in worksheet. **2**

4.(A) Discuss the following MS-EXCEL functions : (Any TWO) **4**
    (i)   COUNT()
    (ii) CEILING()
    (iii) FIND()

(B) What is a macro? Explain steps to create and execute a macro in MS-EXCEL. **3**

(C) Discuss Data -> Filter **3**

(D) What do you mean by a database in EXCEL? Explain the sorting process in EXCEL by taking suitable examples. **3**

5.(A) List out atleast five string (text) built-in functions available in MS-Excel and explain any two of them. **5**

(B) What is a PowerPoint? What do you mean by a slide ? What type of information a slide can have ? **3**

(C) Describe the various effects that can be apply to a presentation. **3**