**DLD (E & F) – Spring 2017**

**Assignment 1**

**Due Date: Tuesday, 31st January, 2017 (in class)**

**Important: There will be a quiz with assignment submission.**

**Question 1:**

1. 512K bits = (?) M bits
2. 2 G bits = (?) M bits

**Question 2:**

1. (E29A)16 × (5C)16 = (?)16
2. (FDEF)16 + (E9BA)16 = (?)16
3. (E9EF)16 – (FDBA)16 = (?)16

(You can verify your answers using windows calculator’s programmer’s view.)

**Question 3:** For the following numbers, the leftmost bit of an 8-bit number represents a parity bit. State the value of the 8-bit number in hexadecimal if the following numbers are to be stored by using odd parity:

|  |  |  |  |
| --- | --- | --- | --- |
| **Decimal Number** | **7-bit binary equivalent** | **8-bit number including parity bit** | **Hexadecimal equivalent of the previous column** |
| 6 |  |  |  |
| 15 |  |  |  |
| 24 |  |  |  |

**Question 4:**

1. Devise a scheme to convert hexadecimal numbers directly to base-4 (directly means without using decimal as intermediate base for conversion)
2. Convert (74A.6B)16 to base-4 using the scheme devised in part (a).

Q. 1.3, 1.4, 1.6, 1.7, 1.8, 1.9, 1.10, 1.11, 1.12, 1.14, 1.15, 1.18, 1.19 (BCD Addition not included) 1.22, 1.23, 1.24, 1.25, 1.26 from Text Book 4th Edition.