**Chapter-2 (Practice Questions Lecture-6)**

1. Express each of the following sign-magnitude binary numbers in single-precision floating point format:
2. 0111110000101011 (b) 100110000011000
3. Determine the values of the following single-precision floating-point numbers:

(a) 1 10000001 01001001110001000000000

(b) 0 11001100 10000111110100100000000

(c) 0 10011000 10000100010100110000000

1. Convert each pair of decimal numbers to binary and add using the 2’s complement form: (a) 33 and 15 (b) 56 and -27 (c) - 46 and 25 (d) -110 and – 84
2. Convert each hexadecimal number to binary:
3. 4616 (b) 5416 (c) B416 (d) 1A316
4. Convert each binary number to hexadecimal:
5. 1111 (b) 1011 (c) 10111011 (d) 10101010 (e) 10101100
6. Convert each hexadecimal number to decimal:
7. 4216 (b) 6416 (c) 2B16 (d) ABC16 (e) 6F116
8. Convert each decimal number to hexadecimal:
9. 3652 (b) 7825(c) 8925 (d) 54 (e) 365
10. Convert each of the following decimal numbers to 8421 BCD:
11. 44 (b) 69 (c) 98 (d) 21 (e) 25 (f) 36
12. Convert each of the BCD numbers to decimal:

(a) 10000000 (b) 001000110111 (c) 001101000110 (d) 010000100001

(e) 011101010100 (f) 100000000000 (g) 100101111000 (h) 0001011010000011

(i) 1001000000011000 (j) 0110011001100111

1. Add the following BCD numbers:

(a) 1000 + 0110 (b) 0111 + 0101

(c) 1001 + 1000 (d) 1001 + 0111

(e) 00100101 + 00100111

(f) 01010001 + 01011000

(g) 10011000 + 10010111

(h) 010101100001 + 011100001000