STLD Question Bank For 2nd Assignment (for ECE-A,B,C) By Faculty ERKR

Unit-1

1. a) Convert the following to Decimal and then to Binary.

i) 1876_{16} ii) $AB22_{16}$ iii) 1212_{8} iv) 1556_{8} v) 977_{10}

b) Perform subtraction with the following unsigned decimal numbers by taking 10's complement of the subtrahend. Verify the result.

i) 5250- 1321 ii). 1753 – 8640

2. a) Convert the following to Decimal and then to octal.

i) 257_{16} ii) 199_{16} iii) 10110001_{2} iv) 11001100_{2} v) 344_{10}

b) Convert the following to Decimal and then to Octal.

i) 10110001_{2} ii) 11001100_{2}

3. a) Convert the following numbers

i) 6753_{8} to base 10 ii) 00111101.0101_{2} to base 8 & base 4

iii) 95.75_{10} to base 2 iv) 7E2CH to base 2 & base 8

4. Perform subtraction with the following unsigned decimal numbers by taking

10's complement of the subtrahend. Verify the result.

i. 5250 – 4421 ii. 5753 – 8740 iii. 60 – 130 iv. 1020 - 2050

5. Convert the following to Binary and then to gray code.

(a) 234516 (b) 123416 (c) 23458 (d) 12578 (e) 77710 (f) 99910

6. Perform the following usin BCD arithmetic.

i. 712910 + 771110 ii. 812410 + 812710

7. What is the Hamming distance? Discuss with the help of examples, what is the role of the

Hamming distance in deciding the error detection and correction capability of a code meant for

the purpose?

8. What is a parity bit? Define even and odd parity. What is the limitation of the parity code

when it comes to detection and correction of bit errors?

9. what is Excess-3 code and write 0-9 decimal to excess-3 code count? Explain Excess-3 code with one example ?

10.What is Hamming code?. Explain 7 bit,12 bit,15 bit code with one example for each one?