

COURSE CODE-18ECC103J

COURSE NAME-DIGITAL ELECTRONIC PRINCIPLES

ASSIGNMENT -1

1. Convert the following Decimal Numbers into Binary and then to Octal and Hexadecimal. (i) 4097.188 (ii) 2048.0625
2. Convert the following Binary Numbers to Decimal.  
(i)10001101 (ii)10111.1011 (iii) 1101111.101
3. Convert the following Hexadecimal numbers to Octal (i)381B (ii) 2647
4. Convert the following Decimal Numbers to BCD (i) 379 (ii)2019
5. Perform the following BCD addition (i) 19 +14 (ii) 184 +576
6. Simplify the following Boolean Expressions (i)  $AB+(AC)'+AB'C(AB+C)$   
(ii)  $A'B + ABD + AB'CD' + BC$
7. Obtain the canonical sum of product form of the function (i)  $Y=A+BC$   
(ii)  $Y=AB+ACD$
8. Encode data bits 0101 into a 7 bit even parity Hamming code.
9. Simplify the expression using K-Map method  
(i)  $Y=\Sigma m (7,9,10,11,12,13,14,15)$   
(ii)  $y= \Pi (0,1,4,5,6,8,9,12,13,14 )$
10. Obtain (a) minimal sum of product and (b) minimal product of sum expressions for the given function  $F(A,B,C,D ) = \Sigma m (0,2,3,6,7 ) + \Sigma d (8,10,11,15)$ .