**E.G.S.Pillay Engineering College, Nagapattinam**

**Department of Electrical and Electronics Engineering**

**Assignment No – III**

**Sub Code & Name : GE 6252–Basic Electrical & Electronics Engg. Max.Marks:50**

**Year & Sem : I / II Sem Date :**

**Name of the Staff : V.MOHAN / K.NANDAKUMAR/ S.SIVAMANI**

**1) i) Convert the following numbers to decimals.**

 **a) 110222 b) 1101112 c) 110.012 ‑‑­ (5)**

 **ii) Convert the following numbers to binary**

 **a) 4310 b) 12510 c) 25.62510 (5)**

**2) i) Convert the following numbers to Octal.**

 **a) 1010011101102 (b) 11001111 c) 1011011.110111 (5)**

 **ii) Convert the following numbers to Decimals.**

 **a) 3728 b) 1278 c) 24.68 (5)**

**3) i) Simplify the following expression Y = (A+B) (A+C’) (B’+C’) (5)**

 **ii) Show that (X + Y’ + XY) (X + Y’) (X’Y) = 0 (5)**

**4) i) Draw a neat diagram of a decade counter and explain the working of the decade counter with suitable waveforms and truth table. (5)**

 **ii) Draw the circuit of various gate circuits and obtain their truth table. (5)**

**5) i) Discuss briefly about**

 **a) Shift register b) Digital to Analog Converter (5)**

 **ii) Write short notes on:**

 **a) RS – Flip Flop**

 **b) D – Flip Flop**

 **c) JK Flip Flop**

 **d) T – Flip Flop**

 **e) JK – Master slave flip flop (5)**