TEST – **Number System** **Date:**

Time – 1 hour **Marks – 25**

1. What is 2's compliment of binary subtraction? Explain binary subtraction using 2's compliment method with suitable example. **4 marks**
2. Explain double dabble method of converting decimal number into binary numbers with suitable example. **3 marks**
3. Perform $(93 - 53)_2$ and $(37 - 12)_2$using binary subtraction. **3 marks**
4. Convert the following: **3 marks**
   (i) $(111011.11)_2 = (?)_{10}$
   (ii) $(F2.A)_{16} = (?)_2$
   (iii) $(72.4)_8 = (?)_2$
5. What is 1's compliment of binary subtraction? Explain binary subtraction using 1's compliment method with suitable example. **4 marks**
6. Perform $(12 + 65)_2$ and $(129 + 56)_2$using binary addition. **3 marks**
7. Convert the following: **5 marks**
   (i) $(727)_8 = (?)_{10}$
   (ii) $(F2.A)_{16} = (?)_{10}$
   (iii) $(72458)_{10} = (?)_{16}$
   (iv) $(A24.\ 5)_{16} = (?)_2$
   (v) (iii) $(1001\ 0111\ 0011\ 0001)_{BCD} = (?)_2$