MODULE 5: TUTORIAL QUESTIONS FOR UNIVERSAL & DUAL SYMBOL

For every circuit, please replace the basic gates with universal gates using the different techniques.

REPLACEMENT TECHNIQUE
  (i)   NAND gates
  (ii)   NOR gates

BUBBLE TECHNIQUE
  (iii)   NAND gates
  (iv)   NOR gates

(1)

(2)

(3)

(4)

(5)

(6)

(7)

(8)

(9)

(10)

(11)

(12)

(13)

(14)

(15)

(16)

(17)

(18)