-----------------Chapter 10-----------------

1. Current resistance, R = ?

Hints: V = Voltage, I = Electric current

1. R = (ans.)
2. R =
3. R = ΔV × ΔI
4. R =

Prove:

The difference in the potential at which p-n junction works is called the current resistance. Small changes in the potential differences in p-n junctions ΔV the small change in the ancillary electric current smaller than the proportion of ΔI is called the current resistance.

So, R =

1. Emitter Current, IE = ?

Hints: Ic = Collector current, IB = Base current

1. IE = IB + Ic (ans.)
2. IE = IB - Ic
3. IE = Ic - IB
4. IE =

Prove:

1. Current amplification factor, α = ?

Hints: Ic = Collector current, IB = Base current, VCB = Collector base voltage

1. α = (ans.)
2. α =
3. α =
4. α = (IB + Ic) VCB

Prove:

1. Amplification factor, β = ?

Hints: Ic = Collector current, IB = Base current, VCE = Collector emitted voltage

1. β = (ans.)
2. β = s
3. β = (IB - Ic) VCE
4. β =

Prove:

1. Bullion of OR gate operation, Y = ? (Page: 331 | FIG: 10.30(B) + 10.3 (B) )

Hints: A, B = input, Y = output

1. Y = A + B
2. Y = A . B
3. Y =
4. Y = (ans.)

Prove:

1. Bullion of AND gate operation, Y = ? (Page: 332 | FIG: 10.4 + 10.31(B) )

Hints: A, B = input, Y = output

1. Y = A . B (ans.)
2. Y = A + B
3. Y =
4. Y =

Prove:

1. Bullion of NOT gate operation, Y = ? (Page: 333 | FIG: 10.5 + 10.32 (B) )

Hints: A = input, Y = output, = Opposite of A

1. Y = (ans.)
2. Y = A
3. Y = A’
4. Y =

Prove:

1. Bullion of NAND gate operation, Y = ? (Page: 334 | FIG: 10.6(A) + 10.6(B) )

Hints:

1. Y = (ans.)
2. Y =
3. Y = A . B
4. Y =

Prove:

1. Bullion of NOR gate operation, Y = ?

Hints:

1. Y = (ans.)
2. Y =
3. Y = A . B
4. Y =

Prove:

1. Bullion of XOR gate operation, Y =? (Page: 335 | FIG: 10.35 (B) + 10.8)

Hints:

1. Y = A ⊕ B (ans.)
2. Y =
3. Y =
4. Y = A ⊙ B