Most Important Questions

Subject: Emerging Domain in Electronics Engineering

UNIT-1

Q1. Explain the working of PN Junction Diode in different biasing conditions with its V-I Characteristics.

Q2. Explain the working of Full wave Bridge Rectifier with its derivation of various parameters.

Q3. Explain the working of Full wave Centre Tapped Rectifier with its derivation of various parameters.

Q4. Differentiate between Zener and Avalanche Breakdown.

Q5. Short Notes on

(i) LED
(ii) Tunnel
(iii) Multiplier

Most Important Questions

Subject: Emerging Domain in Electronics Engineering

UNIT-2

Q1. Differentiate between FET & BJT.

Q2. Explain the working of NPN Transistor.

Q3. Input & Output Characteristics for CE and CB Configuration.

Q4. Relation between α and β Current gain (Amplification Factor) of Transistor.

Q5. Explain the working of N-Channel JFET with its Drain & Transfer Characteristics.

Q6. Explain the working of N-Channel E-MOSFET with its Drain & Transfer Characteristics.

Q7. Explain the working of N-Channel D-MOSFET with its Drain & Transfer Characteristics.

Q8. Numerical on Schokley's Equation.

Q9. Relation between g_m and g_{m0}.

Most Important Questions

Subject: Emerging Domain in Electronics Engineering

UNIT-3

Q1. Block Diagram of Op-amp with its Ideal Characteristics.

Q2. Formula Based Numericals and Derivations

(i) Inverting Amplifier
(ii) Non-Inverting Amplifier
(iii) Adder or Summer for Inverting and Non-Inverting
(iv) Integrator
(v) Differentiator
(vi) Subtractor/ Diffferential Amplifier

Q3. Definitions

(i) CMRR
(ii) Slew-Rate
(iii) Voltage Follower
(iv) Unity Gain Amplifier

Q4. Question on $Vo = A_dV_d + Ac\ Vc$ (If any Value is given in db then we will convert in normal value)

Where $V_d = V1 – V2$

$Vc = (V1 + V2)/2$ $CMRR = Ad/Ac$

DB conversion

Convert X = 40db into normal value

$40 = 20\log_{10}X$

$40/20 = \log_{10}X$

$2 = \log_{10}X$

$10^2 = X$

So X = 10

Most Important Questions

Subject: Emerging Domain in Electronics Engineering

UNIT-4

Q1. Conversions any base to any base

$(\ldots\ldots)_? = (\ldots.)_?$

Q2. 1's, 2's, 9's and 10's Complement with its subtraction.

Q3.What are Universal Logic Gates. Realize all basic gates using Universal Logic Gates.

Q4. SOP & POS Canonical Conversion.

Q5. Minterm (SOP) to Maxterm (POS) and vice versa Maxterm (POS) to Minterm (SOP).

Q6. Minimization of Boolean Expression.

Q7. State Demorgan's Theorem.

Q8. K-Map (4 & 5 Variable with implementation of any one (i) Basic Gates (ii) NAND Gate (iii) NOR Gate

Most Important Questions

Subject: Emerging Domain in Electronics Engineering

UNIT-5

Q1. Explain Block Diagram of Communication System.

Q2. What is Modulation? What is the need of Modulation?

Q3. Derivation of AM Equation with amplitude spectrum. What is Demodulation?

Q4. Relation between P_T & P_C.

Q5. Short Notes on (1.5 Page with 1 diagram)

(i) Satellite Communication
(ii) Radar
(iii) Cellular System
(iv) Wireless Communication & its Evolution(1G, 2G, 3G, 4G….)