

Question Bank

UNIT-I

1. Explain the principal, construction and working of a Condenser Microphone. List its features and characteristics?
2. Explain the construction and working of Electrodynamic Loudspeaker? Explain its features?
3. Draw Woofer and Tweeter in a Common Enclosure and explain their requirement?
4. Describe the cross-over circuits used in loudspeakers? Calculate the (1) Resistance of Woofer and (2) Shunt Capacitance of cross-over circuit, if the woofer has cross-over frequency of 1kHz and series inductance in the circuit of 6mH?
5. Explain the effect of width of air gap of Magnetic Record head on the output? Derive an expression for maximum usable frequency recorded on cassettes? Find the maximum usable frequency if width of air gap is 0.01mm and tape speed is 19cm/sec?
6. Describe with a block diagram the Public Address System and explain in detail its various components?
7. Describe the features of Moving Coil Microphone. List the advantages, disadvantages and applications of it?
8. For a Moving Coil Microphone, calculate the EMF induced if the flux density is 0.03 Wb/m^2 , length of the conductor is 0.8cm and velocity due to sound pressure is 0.2cm/sec?
9. Compare between “tape recorder: and “compact disc audio system”?
10. Define stereophony? Draw and explain the Hi-Fi Stereo System?

UNIT- II

1. Explain the CCIR-B 625 lines scanning process for a TV system?
2. Draw the composite video signal and explain its components?
3. Describe the construction and working of Vidicon Camera Tube?
4. Explain the PAL System with its encoder and decoder blocks?
5. Explain with a block diagram Monochrome Television Transmitter & Receiver?
6. Explain the Vertical and Horizontal resolution in CCIR-B system? Calculate the number of effective active lines and bandwidth of the video signal?
7. Write short notes on (i) Cable TV System, (ii) Digital TV?
8. Draw & explain the Colour TV Receiver with block diagram and explain the Chroma section?

UNIT- III

1. Define Telecommunication? Explain in detail the line communication system?
2. Describe the Cellular Communication System in detail?
3. Describe the functioning of: (i) Caller ID Telephone (ii) Intercoms
4. Explain the limited range cordless telephones?

UNIT – IV

1. Explain in detail the Electronic Controller for Washing Machines?
2. List the various applications of a Microwave Oven? Explain its functional block diagram?
3. Define Refrigeration? With a schematic flow diagram describe the Vapour Compression Refrigeration system?
4. Explain in detail the process of Air Conditioning and list the basic components of an AC system?

UNIT – V

1. Write notes on: (i) Decorative Lighting and (ii) LCD Timer with Alarm?
2. Define the role of a battery eliminator with a bridge rectifier circuit? Explain the battery charger circuitry?
3. Explain the principal and the architecture of a Calculator device?
4. Explain the principal of operation, circuitry and working of a Digital Watch?
5. Explain the following: (i) An electronic guessing game and (ii) LM78XX IC Regulators?
6. Explain the following Regulated DC Supplies using: (i) Diodes and Transistors and (ii) Operational Amplifiers?
7. Write notes on: (i) Uninterrupted Power Supply and
(ii) Inverter?
8. Describe in brief the two telephone systems: Mobile and Cellular?

ALL THE BEST