

QUESTION BANK
(B.E. SEM VI EC ATKT EXAM)
GUJARAT UNIVERSITY
Audio Video Engineering

Each Question of 10 Marks

- Q.1.** Explain characteristics of a microphone
- Q.2.** Compare various types of microphone
- Q.3.** Explain the Construction, operation, advantages and disadvantages of dynamic microphone and ribbon microphone
- Q.4.** Explain the Construction, operation, advantages and disadvantages of Carbon microphone and Condenser microphone.
- Q.5.** Explain the requirement and structure of loudspeaker.
- Q.6.** Explain the basic principle of working of a loud speaker, equivalent circuits of speaker and characteristic impedance of loud speaker.
- Q.7.** Explain the Construction, advantages and disadvantages of Electrostatic type loud speaker.
- Q.8.** Explain: (1) Woofer and Tweeter. (2) Sound cards and mixers.
- Q.9.** What is directional response of Loud Speaker and Microphone? Describe the general procedure of measuring the directivity of a Loud Speaker.
- Q.10.** What is frequency response of Loud Speaker and Microphone? Describe the general procedure of measuring the frequency response of a microphone
- Q.11.** Explain the significance of Cross Over Network.
- Q.12.** Give characteristics of Digital Audio Broadcasting. Write its advantage and

disadvantages.

- Q.13.** What is digital audio compression? Why is it used? Explain briefly different formats of digital audio compression.
- Q.14.** Write short note on : Stereophony and multichannel sound.
- Q.15.** Distinguish between single ended power amplifier and push pull amplifier.
- Q.16.** Explain the Construction, advantages and disadvantages of Horn type loud speaker.
- Q.17.** Draw and Explain block diagram of PA systems.
- Q.18.** What is sampling? How quantizing is useful? Also draw and explain PCM system in detail.
- Q.19.** Why sound is required to absorb? Also draw and explain the architectural acoustics.
- Q.20.** Draw the block diagram of colour TV transmitter and explain each block in detail.
- Q.21.** Draw and explain picture signal transmission. Also explain vestigial transmission in detail.
- Q.22.** What is luminance and chrominance signal? State its significance. Also explain separation of U and V colour phasors in detail.
- Q.23.** Justify the choice of 625 lines for TV transmission. Why the total number of lines kept odd in all television systems. Explain briefly interlaced scanning with necessary waveforms.
- Q.24.** What do you understand by compatibility between monochrome and colour TV systems and how is this achieved. Why (G-Y) is not chosen for transmission?
- Q.25.** Draw block diagram of PAL-D colour receiver.
- Q.26.** Explain why RGB matrixing is preferred in present day colour receivers? Describe with suitable diagram how R, G and B video signals are obtained

from U and V signals.

- Q.27.** Describe briefly co-channel interference adjacent channel interference and Ghost interference effects.
- Q.28.** What is video compression? List the techniques used for video compression and explain any two techniques in detail.
- Q.29.** List the different types of TV systems and standards used and explain any two in detail.
- Q.30.** Explain the merits and demerits of negative modulation in TV transmission.
- Q.31.** Draw and explain the block diagram of VHF Tuner
- Q.32.** Draw simplified block diagram of PAL colour encoder and explain in detail pal swinging burst.
- Q.33.** Explain how the horizontal and vertical sync pulses are separated and shaped at the receiver.
- Q.34.** List the different interfaces used for Television technology and explain any two in detail.
- Q.35.** Draw the block diagram of monochrome TV transmitter and explain each block in detail.
- Q.36.** Draw and explain the operation of color picture tube.
- Q.37.** Explain the power supply for TV Receiver.
- Q.38.** Draw the composite video signal and explain it.
- Q.39.** Explain the UHF and electronic tuning for TV receiver
- Q.40.** Explain the various antennas for TV transmitter as well as receiver.