

ANNA UNIVERSITY - 2006
B.E/B.TECH III SEMESTER DEGREE EXAMINATION
DISPLAY SYSTEMS ENGINEERING
(INFORMATION TECHNOLOGY)

TIME-3HOUR
MARK-100

ANSWER ALL QUESTIONS

PART A (10 * 2 = 20)

1. Compare the viewing angle and screen distance of a conventional television and high definition television (HDTV).
2. What factor plays an important role in the selection of number of lines in the TV system.
3. Draw the optimum speaker systems placement diagram for HDTV.
4. State weber's law of luminance discrimination.
5. State Lamber's cosine law.
6. Draw the spectral characteristics of the human eye.
7. Draw the frequency response characteristics of human ear.
8. State why video signal is frequency modulated before recording on the tape of a video cassette recorder.
9. State the disadvantages of shadow mask colour television picture tube.
10. With reference to picture tube explain dynamic convergence.

PART B (5 * 16 = 80)

11. Discuss the visual characteristics of the human eye. Explain how these are used for setting standards in display systems.
12. Explain the terms: Complementary colours, Primary colours, Hue and saturation.
(OR)
How are the colours represented on the chromaticity diagram? What is the significance of the diagram in colour television?
13. Describe the construction of a colour television camera and its optical system using dichroic mirrors and prisms.
(OR)
Explain the principle of LCD display.
14. Explain how zone pattern signals are used in the testing of high definition TV system.
(OR)
Write block diagram explain how Dolby system is used in the noise reduction of audio amplifiers
15. With block diagram describe the closed loop position control system used in X - Y plotters.
(OR)
Describe the magnetic deflection system and convergence circuits used in colour TV picture tubes.