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Code: 4G375

IV B.Tech. I Semester Supplementary Examinations April 2019

Television Engineering

(Electronics and Communication Engineering)

Max. Marks: 70

Time: 3 Hours

Answer all five units by choosing one question from each unit (5 x 14 = 70 Marks)

UNIT-I

1. a) With a neat block diagram, explain the working of a TV transmitter in detail.
- b) Write short notes on: i) Aspect Ratio ii) Kell factor iii) Persistence of vision
iv) Resolution

OR

2. a) With a neat block diagram explain the operation of basic TV Transmitter
- b) Explain the importance of interlaced scanning with a neat diagram.

UNIT-II

3. a) Differentiate between a monochrome and colour TV camera tubes.
- b) Explain the monochrome picture tube working with a neat sketch.

OR

4. State and briefly explain about characteristics of picture tube? Explain silicon diode array vidicon camera tube with neat diagram.

UNIT-III

5. a) Discuss briefly about sync separation and processing in monochrome television receiver.
- b) Explain the functioning of IF subsystem in monochrome TV receiver.

OR

6. a) Draw the block diagram of the sound section of a monochrome TV receiver and explain the functions performed by each block.
- b) Explain the block diagram of video amplifier in black and white receiver.

UNIT-IV

7. a) Draw the block diagram of VHF tuner of TV receiver and explain.
- b) Explain how accuracy is achieved and maintained by using digital tuning of electronic tuners with block diagram.

OR

8. a) What are the functions performed by a TV receiver tuner?
- b) Explain the block diagram of digital FM detector.

UNIT-V

9. a) Explain the working principle of color killer circuit with a neat sketch
- b) Explain the PAL-D decoder with the help of a neat block diagram.

OR

10. a) Draw the block diagram of PAL encoder & decoder and explain its functioning. Compare its performances with NTSC system.
- b) Why a burst of subcarrier is sent along with the sync & blanking pulses.
