Reg. No. : | | | | | | | | | | |

Question Paper Code: 49412

B.E./B.Tech. DEGREE EXAMINATION, APRIL 2018

Elective

Electronics and Communication Engineering

14UEC912- TELEVISION AND VIDEO ENGINEERING

(Regulation 2014)

Duration: Three hours Maximum: 100 Marks

PART A - (10 x 1 = 10 Marks)

1. Which of the following camera tube uses lead oxide (PbO) for the photoconductive target plate CO1- R

   (a) Vidicon (b)Saticon (c)Plumbicon (d)Image Orthicon

2. Camera signal output without sync is called CO1- R

   (a) Black burst (b)Composite video

   (c)General lock video (d)Non-Composite video

3. In color picture tube, degaussing is done with CO2- R

   (a) Direct current (b)Alternating current

   (c)60HZ alternating current (d)90HZ alternating current

4. The number of lines scanned per frame in the raster on the picture tube screen is CO2- R

   (a)525 (b)625 (c)262 (d)10

5. The hue of color sync phase is CO3- R

(a)Red (b)Cyan (c) Blue (d)Yellow-green

6. The R,G,B video drive controls are set for _____ in the picture CO3- R

(a)Gray (b)Black dark (c) White (d) Green

7. Which of the following stages has bias from the ACC and color killer circuit CO4- R

(a)R-Y demodulator (b)Chroma BPA

(c)R-Y video amplifier (d)Color Oscillator

8. Which of the following stages must be on during horizontal fly back time CO4- R

(a) Y video amplifier (b) Burst amplifier

(c) Chroma BPA (d) R-Y video amplifier

9. Which system uses a laser light beam for playback? CO5- R

(a) CED (b)tamex be (c) VHD (d)VLF

10. To make the tape speed the name in playback as in recording, the tape speed is regulated by the CO5- R

(a) Erase head (b)Video silent tracks audio track

(c)Control-track pulses (d)Control head

PART – B (5 x 2= 10Marks)

11. What is known as flicker? CO1- R

12. List the requirements of receiving antenna. CO2- R

13. What are the primary colors? Why are they called so? CO3- R

14. What are the demerits of PAL systems? CO4- R

15. List the merits of digital TV receivers that are not achievable in a analog receiver. CO5- R

PART – C (5 x 16= 80Marks)

16. (a) Illustrate the working principle of Image orthicon camera tube. CO-1 U (16)

Or

(b) Explain the beam deflection principle in monochrome picture tube. CO-1 U (16)

17. (a) Draw and explain some of the TV transmitting and receiving antennas. CO-2 U (16)

Or

(b) Describe the basic principles of AGC and explain how the control voltage is developed and applied to IF and RF amplifier stages in the receiver. CO-2 U (16)

18. (a) Discuss the gun structure and working principle of delta gun picture tube. CO-3 U (16)

Or

(b) Explain the various pincushion correction techniques. CO-3 U (16)

19. (a) Draw the block diagram and Explain the operation of PAL encoder and decoder. CO-4 U (16)

Or

(b) Explain the operation of SECAM encoder and decoder. CO-4 U (16)

20. (a) Give detailed notes on Digital TV transmission and reception. CO-5 U (16)

Or

(b) Draw and explain the principle of DVD players. Explain the recording and playback detail with diagram. CO-5 U (16)