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Question Paper Code: 49412

B.E./B.Tech. DEGREE EXAMINATION, NOV 2019

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. Precise scanning size and linearity are most important in CO1- R
(a) a black-and-white camera (b) a plumbicon
(c) a single-tube color pickup (d) a saticon
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. AGC circuit is used to control the _____ of RF and IF CO2- R
amplifiers.
(a) Voltage (b) Gain (c) Power (d) Current
4. The _____ information is also used to protect the flyback CO2- R
transformer from overload.
(a) EHT (b) AGC (c) UHF (d) Both a & b
5. In monochrome receiver, the orange hue will appear as _____ CO3- R
(a) Dark Gray (b) Black (c) Bright Gray (d) White
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 same 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. Discuss the use of ACC amplifier? CO4- R
15. List out the Merits of digital TV 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) 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)
- Or
- (b) Explain briefly about TV transmission antennas. CO-2 U (16)

18. (a) Explain the various pincushion correction techniques CO-3 U (16)
Or
(b) Describe the construction details of a PLL tube and explain how its different from delta gun colour tube. What are astigmatism and errors in it? 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) Draw the simplified block diagram of the NTSC colour receiver and explain each block. CO-4 U (16)
20. (a) Give detailed notes on Digital TV transmission and reception CO-5 U (16)
Or
(b) Write notes on: CO-5 U (16)
(i) 3D TV.
(ii) EDTA.

