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Question Paper Code : 60418

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2016.

Seventh/Eighth Semester

Electronics and Communication Engineering

EC 2034/EC 711/EC 1007/10144 ECE 44 — TELEVISION AND VIDEO
ENGINEERING

(Regulations 2008/2010)

(Common to PTEC 2034 - Television and Video Engineering for B.E. (Part-Time)
Seventh Semester - ECE – Regulations 2009)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. State the major functions of a camera tube.
2. What do you refer by persistence of eye?
3. State the main purpose of using VHF tuner.
4. Why do we prefer hollow conductor in Antenna Mounting?
5. Define luminance and hue.
6. Draw the chromaticity diagram.
7. How will you do the frequency division process in PAL-D system?
8. List the merits of PAL system.
9. Differentiate DVD from CD.
10. List the basic elements of projection system.

PART B — (5 × 16 = 80 marks)

11. (a) (i) What is Interlaced scanning? Explain in detail. (10)
(ii) Draw and explain the construction and working of Vidicon camera tube. (6)

Or

- (b) Sketch a neat figure of Monochrome picture tube and explain beam deflection, picture tube screen, picture tube control. (16)
12. (a) Draw the detailed block diagram of a monochrome television receiver and explain.

Or

- (b) (i) Discuss in detail on EHT development from the horizontal output circuit of the sweep amplifier. (8)
(ii) Draw the circuit diagram of DC re-insertion and explain. (8)
13. (a) Draw the structure and explain the raster scanning in a Trinitron colour picture tube.

Or

- (b) Explain how the grey scale tracking is carried out both for low and high light levels of the video signal.
14. (a) Illustrate the basic working of a comb filter. Explain fully how the C and Y signals are separated without any loss of bandwidths.

Or

- (b) (i) Explain the encoding process in the PAL colour system.
(ii) Justify the choice of 3.579545 MHz as the sub carries in the NTSC system.
15. (a) (i) Narrate the working of Cable TV. (8)
(ii) Illustrate the need and concept of scrambling technique. (8)

Or

- (b) Brief the following:
(i) LCD (8)
(ii) 3DTV. (8)