B 319

B.E/B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2005.

Sixth Semester

Electronics and Communication Engineering

EC 345 – TELEVISION AND VIDEO ENGINEERING

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What is scanning?

2. Give reasons why do we prefer negative transmission.

3. What are the main sections of video IF sub-system?

4. Define image rejection ratio.

5. Mention the main characteristics of a compatible television system.

6. What is gamma of the picture?

7. Define Hue and saturation.

8. What are complementary colours? How do you find the complement of a particular primary?

9. What is a Vectroscope?

10. What is extended coverage of television?

PART B — (5 × 16 = 80 marks)

11. (i) Describe the interlaced scanning to avoid flicker in TV receiver. (6)

(ii) Explain working of a PAL colour receiver. (10)

12. (a) (i) Explain the working of silicon diode array Vidicon camera tube. (10)

(ii) With a neat block diagram explain the features of a monochrome television receiver. (6)

Or

(b) (i) What are the constituents of composite video signal and explain their uses? (10)

(ii) Explain vestigial sideband transmission. (6)

13. (a) (i) Discuss the factors which influence the choice of intermediate frequencies in TV receivers. (8)

(ii) Write the need and the working of automatic gain control circuit of a monochrome television receiver. (8)

Or

(b) (i) Illustrate the features of TV receiver antenna and VHF tuners. (8)

(ii) Explain in detail the Intercarrier sound section of a monochrome receiver. (8)

14. (a) Draw neatly the block diagram of a SECAM receiver and explain. (16)

Or

(b) (i) Describe color signal processing in PAL receiver. (10)

(ii) Discuss the merits and demerits of the PAL system. (6)

15. (a) (i) Discuss the basic principles of remote control system. (6)

(ii) Write short notes on

(1) Cable television (5)

(2) Closed circuit television. (5)

Or

(b) Discuss briefly on

(i) Satellite television (8)

(ii) Digital TV. (8)
