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Name.....

Reg. No.....

SEVENTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION DECEMBER 2007

EC/IC/AI 2K 705 (E)—TELEVISION ENGINEERING AND RADAR SYSTEMS

(New Scheme)

Time : Three Hours

Maximum : 100 Marks

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I. (a) What is channel Bandwidth ? Write its significance.

(b) Explain the specifications of CCD Camera.

(c) Define and explain :

(i) Hue.

(ii) Saturation.

(d) What is a Chrominance signal ? Explain.

(e) Explain the advantages of Video bit reduction.

(f) What is a Cable decoder ? Explain its functioning in detail.

(g) What are Radar displays ? Write the types of displays. Sketch them.

(h) Differentiate sequential lobbing from Conical scanning.

(8 × 5 = 60 marks)

II. (a) (i) Explain the advantages of VSB transmission in detail.

(ii) What are positive and negative modulation ? Explain in detail.

Or

(b) (i) Draw a neat block diagram of TV receiver and explain its principle of Operation.

(ii) Explain in detail the principle of NTSC Coder.

III. (a) Describe in detail the advantages of co-axial cable for CATV.

(b) What are Scramblers ? Explain their need and applications. Explain the types of scramblers in detail.

IV. (a) Draw a neat sketch of Vidicon Picture tube and explain its principle of operation.

Or

(b) Write short notes on :

(i) SECAM coder and decoder.

(ii) Front porch.

V. (a) Discuss how the azimuth and range of a target is measured with the help of PPI. Calculate the maximum range of a radar set.

Or

(b) Draw a neat block diagram of 2D Monopulse tracking radar and explain its principle of operation.

(4 × 15 = 60 marks)