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Name.....

Reg. No.....

# SEVENTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION, DECEMBER 2006

## EC/AI/IC 2K 705 E—TV ENGINEERING RADAR SYSTEMS

Time : Three Hours  Maximum : 100 Marks

I. (a) Write the advantages of CCD camera.

(b) Differentiate VSB modulation scheme from SSB scheme.

(c) What is electron optics in TV picture tube ? Explain it.

(d) Explain the significance of Bandwidth in TV applications.

(e) What is CCTV ? Explain its characteristics.

(f) What are scrambler and unscrambler ? Explain them.

(g) Write the limitations of simple Radar Range equation.

(h) What is a Doppler Radar ? What is its applications ?

(8 × 5 = 40 marks)

II. (a) Explain what is meant by blanking and synchronizing pulses ? What are the functions of these pulses in TV ? Explain.

*Or*

(b) (i) What is Interlaced scanning ? Explain its significance.

(ii) Describe by a block diagram, the general working of a TV receiver.

III. (a) (i) Describe the construction of TV picture tube with neat sketches.

(ii) What are blanking and sync Pulses ? Explain.

*Or*

(b) Explain in detail the principle of PAL and SECAM coder with neat sketches.

IV. (a) (i) Describe how the lever of background brightness is maintained at the same level for each segment of the signal, with neat sketches.

(ii) Explain about cable decoders..

*Or*

(b) Write short notes on :

(i) MPEG standard.

(ii) Digital TV specification.

V. (a) Differentiate CW radar from FM-CW radar. Explain the principles of both the radars with neat sketches.

*Or*

(b) (i) Explain the operation of the sweep circuit and enumerate its special features.

(ii) Give an account on 'Radar frequencies'.

(4 × 15 = 60 marks)