



EIGHTH SEMESTER B.TECH. (ENGINEERING) DEGREE
EXAMINATION, JUNE 2010

EC 04. 805 (D)—TELEVISION ENGINEERING AND RADAR ENGINEERING

Time : Three Hours

Maximum : 100 Marks

Answer all questions.

Part A

1. (a) Explain what is meant by channel bandwidth.
- (b) Explain what is meant by synchronization pulses.
- (c) Draw the Colour TV camera.
- (d) Compare monochrome TV camera and Colour TV camera.
- (e) List the advantages of Digital TV.
- (f) Write short notes on Cable decoders.
- (g) List the application of RADAR.
- (h) Express the radar equation in terms of minimum detectable signal.

(8 × 5 = 40 marks)

Part B

2. (a) Draw the block diagram of television transmitter and explain.
- Or
- (b) What is meant by CCD camera ? Explain in detail about CCD camera.

(15 marks)

3. (a) Explain in detail about NTSC de coder.

Or

- (b) Explain in detail about the Colour TV picture tube.

(15 marks)

4. (a) Explain in detail about the Digital Colour TV receiver.

Or

- (b) Write short notes on :

- (i) MPEG standard.
- (ii) Cable frequencies.

(8 marks)

(6 marks)

Turn over

5. (a) (i) Derive the simple form of RADAR range equation. (8 marks)

(ii) What is minimum detectable signal? Derive the relation between minimum detectable signal and maximum range. (7 marks)

Or

(b) Explain in detail about FM-CW radar. (15 marks)

[4 x 15 = 60 marks]