SEVENTH SEMESTER B.TECH (09 Scheme) DEGREE SUPPLEMENTARY EXAMINATION, APRIL 2014

EC/PTEC 09 705 L15 – TELEVISION AND RADAR ENGINEERING

Time : Three Hours   **Maximum : 70 Marks**

PART A
Answer all questions

1. Define Raster.

2. Name two types of photosensitive materials used in television camera.

3. Define Luminance.

4. What is RADAR?

5. Define Doppler Effect.

(5X2 =10 marks)

PART B
Answer any four questions

6. Describe Interlaced scanning.

7. Explain Vestigial Sideband Modulation.

8. What is a color burst?. If the back porch of the horizontal blanking pulse is 0.07H, what is the maximum number of cycles of the color burst signal that can be transmitted?

9. Explain the various frequency ranges used for RADAR.

10. Explain minimum detectable signal of RADAR.

11. Write a note on A scope and PPI display.

(4X5 =20 marks)

PART C
Answer all questions

12. (a) Draw the block diagram of a Monochrome TV transmitter and describe its basic operation.

(or)

(b) With neat sketch explain the various components of a Composite Video signal.

13. (a) Describe I, Q and C signals. Determine the value of Y for the following R, G and B signals: R=0.8V, G=0.6V and B=0.2V.

(or)

(b) With block diagram, explain the color TV receiver.

14. (a) Derive the radar range equation.

(or)

(b) Briefly explain the various antenna parameters of RADAR.

15. (a) With block diagram, explain CW radar.

(or)

(b) With block diagram explain Pulse Doppler MTI radars.

(4X10=40 marks)

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