G 426 (Pages : 2) Reg. No.....

Name.....

B.TECH. DEGREE EXAMINATION, MAY 2014

Sixth Semester

Branch : Electronics and Communication Engineering

EC 010 606 L06—TELEVISION AND RADAR ENGINEERING (Elective I) [EC]

(New Scheme—2010 Admission onwards)

[Regular/Improvement/Supplementary]

Time : Three Hours Maximum : 100 Marks

Part A

Answer **all** *questions.*
Each question carries 3 *marks.*

1. Explain the merits of vestigial sideband transmission.
2. Define luminance, hue and saturation.
3. Give the applications of radar.
4. Differentiate A-scope, B-scope and PPI.
5. How does a geostationary satellite system work ?

(5 × 3 = 15 marks)

Part B

Answer **all** *questions.*
Each question carries 5 *marks.*

6. Why is interlaced scanning preferred over progressive scanning ?
7. Give the working principle of a precision-in-line colour picture tube.
8. Derive radar range equation.
9. Explain the principle of over the horizon radar.
10. Describe the working of a satellite receiver with the aid of block diagram.

(5 × 5 = 25 marks)

Part C

Answer **all** *questions.*
Each question carries 12 *marks.*

11. Explain the various components of a composite video signal.

Or

12. With the help of block diagram give the operation of a monochrome receiver system.

Turn over

13. Describe the principle of NTSC coder with its block diagram.

Or

14. Explain the working of PAL-D colour receiver with the aid of block diagram.

15. Describe the working principle of LCD and plasma screen receiver.

Or

16. Explain cable television distribution system with a neat block diagram.

17. Explain two-co-ordinate amplitude comparison monopulser tracking radar.

Or

18. Give the principle of MTI radar and delay line canceller.

19. List the various types of duplexers used in radar with their principles.

Or

20. Give the principle of electronically steered phased array antenna and its applications.

(5 × 12 = 60 marks)