(Pages : 2) **5801**

Reg. No. : .....

Name : .....

Eighth Semester B.Tech. Degree Examination, October 2014
(2008 Scheme)
08.802 : RADAR AND TELEVISION ENGINEERING (T)

Time : 3 Hours Max. Marks : 100

PART – A

Answer **all** questions. **Each** question carries **4** marks.

1. Define radar cross section and blind speed of MTI radar.
2. If an MTI radar operates at 10 GHz with PRF of 0.8 Hz, find two lowest blind speed.
3. List the salient features of radar transmitter.
4. What is the maximum unambiguous range if a radar operates at a PRF of 1 kHz and its operating wavelength is 3 cm ?
5. Explain the functions of colour killer circuit.
6. What are the constituents of composite video signal ?
7. How are chrominance signals obtained ?
8. All TV standards have odd number of lines. Explain.
9. List the disadvantages of OFDM transmission scheme.
10. Explain the principle of operation of plasma display. **(10×4=40 Marks)**

P.T.O.

PART – B

Answer **any two** questions from **each** Module. **Each** question carries **10** marks.

Module – I

11. What is Doppler effect ? Explain the operation of FM-CW radar when the modulation is triangular and the target is not stationary with the help of sketches.

12. Explain the principle of operation of LORAN-A system with diagram.

13. A marine radar operating at 10 GHz has a maximum range of 50 km with an antenna gain of 4000. If the transmitter has a power of 250 kW and minimum detectable signal of 10^{-11} W. Determine the cross section of target the radar can sight.

Module – II

14. Draw the block diagram of PAL coder and explain. Explain how phase errors are cancelled in PAL system.

15. Explain various subsections of a VHF tuner.

16. Draw a typical IF amplifier response of a TV receiver and explain.

Module – III

17. Draw the schematic diagram of DVB-C transmitter and explain.

18. Draw the OFDM system model and explain the operation.

19. Explain with diagram the principle of operation of LED display. **(6×10=60 Marks)**