(Pages : 2) **E – 5553**

Reg. No. : .....

Name : .....

Eighth Semester B.Tech. Degree Examination, November 2018
(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. Explain the principle of loop antennas, with neat sketches.
2. With the help of neat sketches, explain the working of a klystron amplifier.
3. Draw the composite video signal for 625 line monochrome TV and explain the details of vertical sync signal.
4. What is vestigial side band correction ? How is it done ?
5. Summarize the main characteristics of DVB-S, DVB-C and DVB-T signals.
6. What are the undesirable effects of high amplitude noise pulses in sync-separator circuits ? How are these effects overcome ?
7. What is QAM ? Derive an expression for the average probability of error for a QAM system.
8. What is Doppler effect ? Derive an expression for the shift in frequency when the source is approaching observer.
9. Draw the structure of the MPEG-2 packetized elementary stream header.
10. Explain the working principle of a liquid crystal display.

P.T.O.

PART – B

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

Module – I

11. What are duplexers in connection with a radar ? What are the various types of duplexers ? Explain.

12. Draw the block diagram of an MTI radar with power oscillator transmitter and explain its working.

13. Draw the block diagram of amplitude comparison monopulse radar and explain the working.

Module – II

14. Describe NTSC system, with the help of a block diagram. What are the limitations of NTSC system ?

15. Show with a circuit diagram, how dc potentials are supplied to the various electrodes of the picture tube.

16. Explain with suitable sketches the basic principle of a CCD image scanner. Describe briefly the manner in which the CCD array is scanned to provide interlaced scanning.

Module – III

17. What is source coding ? What are the different source coding schemes used digital TV ?

18. With the help of a block schematic, explain the IPTV system.

19. Draw the block diagram of a DVB satellite receiver and explain the function of the blocks.