



Reg. No. :

Name :

**Eighth Semester B.Tech. Degree Examination, April 2016
(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. What is blind speed ? Explain.
2. If stationary CW radar transmits at a frequency of 6 GHz, find Doppler frequency due to a target moving with a radial velocity of 200 km hr.
3. List the salient features of DME.
4. What is the maximum unambiguous range if a radar operates at a PRF of 1KHz ? Its operating wavelength is 3 cm.
5. Define a TV broadcast channel. Outline the means to find the picture and sound carries frequencies from the given channel frequency range.
6. How do you differentiate between a negative and a positive transmission polarity ?
7. What is the principle of operation of SECAM colour system ?
8. How do you separate composite sync into its component parts ?
9. List the features of DVB-S.
10. Explain the principle of plasma display. **(10×4=40 Marks)**



PART – B

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

Module – I

11. A radar receiver has an IF bandwidth of 3 MHz and a noise figure of 9 dB. Find the minimum receivable signal.
12. Draw the block diagram of pulsed Doppler radar and explain its working.
13. Explain the salient features of LORAN – A. Explain the operation of it.

Module – II

14. In the scanning process, 485 lines are scanned per frame and 30 frames are transmitted per second. What is the visual signal bandwidth ? Assume aspect ratio to be 4 : 3.
15. Draw one stage of a typical IF section of a TV receives and explain its operation. What factors are given the maximum importance in designing IF amplifier ?
16. Draw and explain composite video signal and explain.

Module – III

17. Draw the block diagram of MPEG encoder and explain.
 18. Draw the block diagram of digital TV transmission set up and explain.
 19. Draw the schematic diagram of DVB-TPTV and explain. List the services offered by the system. **(6×10=60 Marks)**
-