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A – 2361

Reg. No. : .....

Name : .....

**Eighth Semester B.Tech. Degree Examination, April 2016  
(2008 Scheme)**

**08.802 : RADAR AND TELEVISION ENGINEERING (T)**

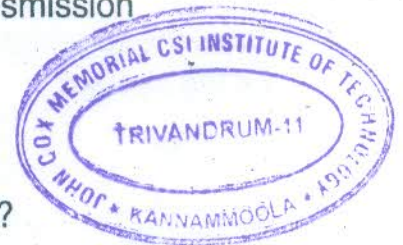
Time : 3 Hours

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)**

P.T.O.



## 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 receiver 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-T/PTV and explain. List the services offered by the system. **(6×10=60 Marks)**
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