



Reg. No. :

Name :

**Eighth Semester B.Tech. Degree Examination, April/May 2012
(2008 Scheme)
08.802 : RADAR AND TELEVISION ENGINEERING (T)**

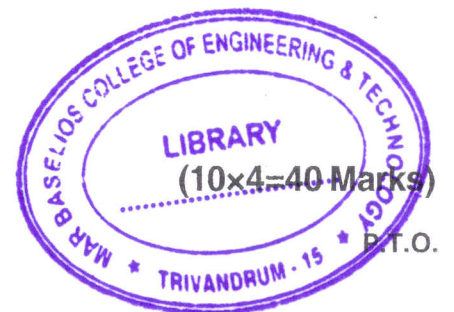
Time : 3 Hours

Max. Marks : 100

PART – A

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

1. Discuss the merits of the frequency band or around 100 KHz for navigational aids.
2. A MTI radar operating at 10 GHz is used to measure the speed of cars. If the doppler frequency shift measured from the moving car is 1.6 KHz, calculate the speed of the car.
3. State the major functions of RF tuner.
4. What do you understand by Kell factor ?
5. Compare positive modulation and negative modulation.
6. A TV standard has 819 scan lines and line frequency of 20475 Hz. Assuming 15% as blanking time, find the video bandwidth required.
7. Define vertical resolution. Determine vertical resolution of 625 line system.
8. What do you mean by digital TV over IP ?
9. Explain the principle of operation of plasma display.
10. How does OFDM works ?





PART – B

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

Module – I

11. How do you distinguish stationary targets and moving targets ? Explain the principle and working of MTI radar.
12. Explain the working of ILS. Give detailed diagram of location of the components of the ILS system with respect to runway.
13. Describe the operation of the DME beacon transmitter. The beacon has a delay of 50 MS and recovery period of 100 MS after each transmission. How does this affect the operation of the beacon ?

Module – II

14. Explain with suitable sketches the basic principle of a solid state image scanner. Describe briefly the manner in which the CCD array is scanned to provide interlaced scanning.
15. What do you mean by vestigial side band correction ? Draw overall picture IF response curve of a receiver showing vestigial side band correction.
16. Explain how the Y and colour difference signals are developed from camera output. Why is the Y signal set = $0.3R + 0.594 + 0.11 B$?

Module – III

17. Draw the block diagram of MPEG coder/decoder and explain its operation.
18. What is flat panel display system ? Explain the working LCD system with figure.
19. Explain the DCT image compression technique with necessary figures.

(6×10=60 Marks)

