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B – 2641

Reg. No. :

Name :



**Eighth Semester B.Tech. Degree Examination, January 2017
(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.

(10×4=40 Marks)

1. What is a duplexer ? Explain.
2. Calculate the beam width of a radar antenna operating at 3 GHz with a dimension of 32.5 wavelengths.
3. How a loop antenna can be used in direction finding ?
4. What is polarization error in direction finding ? Explain.
5. Explain the need for blanking pulses.
6. What is vestigial side band transmission ? Explain.
7. What is AFC ? Explain.
8. Explain the principle of interlaced scanning.
9. What is DVB-S standard ? Explain.
10. What is the need to digitize video signal ? Explain.

P.T.O.



PART – B

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

(6×10=60 Marks)

Module – I

11. Derive the simple form of the radar equation.
12. With a block diagram explain the operation of MTI radar in detail.
13. Explain the operation of radio compass with a block diagram.

Module – II

14. What is kell factor ? Derive the resolution of Indian TV system for a kell factor of 0.69.
15. Explain the block diagram of a monochrome TV receiver.
16. Describe the working of delta gun picture tube.

Module – III

17. Draw the block diagram of digital TV receiver and explain the functions of each block.
 18. Explain in detail the encoder and decoder based on MPEG-4 compression.
 19. Explain the functional blocks of DVB transmitter.
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