09/10/14

F.Y.I.T. ETCS

VCD- F.Y.B.S.C(I.T.) ETCS I-SEMISTER 2014-2015 75- MARKS 2 1/2 -HRS SEM- I

2014

NOTE : 1.Figure should be Neat and labeled.
2. All Questions are compulsory.
3. Right side indicates marks.

Q.1 Answer any 2 from following. (10)

1. Write a short note on Zener diode.
2. Explain the concept of PNP & NPN Transistor.
3. Difference between BJT and FET.
4. Draw and explain Bridge rectifier.

Q.2 Answer any 2 from following. (10)

1. Explain the amplifier notations.
2. Draw and explain frequency response of multistage amplifiers.
3. Draw and explain DC amplifier.
4. Draw and explain Darlington pair.

Q.3 Answer any 2 from following. (10)

1. In Monostable circuit, $R_A = 10K\Omega$, the output pulse width is =5ms.Determine the value of C.
2. Draw and explain Astable Multivibrator.
3. Difference between Oscillator and amplifier.
4. Draw and explain RC Phase shift Oscillator.

Q.4Answer any 2 from following. (10)

1. Draw and explain Pilot Carrier SSB system.
2. Draw and explain Envelope Detector.
3. Explain concept of SSB with advantages and disadvantages.
4. Draw and explain Balanced Modulator using FET.

Q.5 Answer any 2 from following. (10)

1. Draw & explain Pulse Amplitude Modulation.
2. Write a short note on Radio Receiver.
3. Difference between FDM & TDM.
4. Explain the concept of Sampling Process & Quantization noise.

Q.6 Answer any 2 from following. (10)

1. Explain PSK and FSK.
2. Write a short note on Ray model.
3. Explain Propagation Modes of Fiber optic.
4. Explain optical sources.

Q.7 Answer any 3 from following. (15)

1. Explain Conductor, Semiconductor and Insulator.
2. Draw and explain BJT as a single stage amplifier.
3. Draw and explain Hartley Oscillator.
4. Explain need for modulation system.
5. Explain TDM with advantages and disadvantages.
6. Explain the Need for Fiber optic communication.