**17EC2201 – PULSE & SWITCHING CIRCUITS**

(Common to ECE and EEE)

**UNIT-I**

**WAVE SHAPING CIRCUITS**: Types of waveforms, RC low pass and high pass circuits, rise time, tilt, Diode as a switch, Diode clipper and clamper circuits.

**UNIT-II**

**REVIEW OF SWITCHING CIRCUITS:** BJT Inverter, NMOS, PMOS and CMOS Switching circuits and their implementation (universal gates only).

**UNIT-III**

**MULTI-VIBRATORS:** BJT switch and switching times, Bi-stable multivibrator & triggering methods, Schmitt-trigger, Mono-stable and Astable multi-vibrators using BJT.

**UNIT-IV**

**TIME BASE CIRCUITS:** RC sweep circuits, constant current Miller and Bootstrap time base generators using BJT’s, UJT relaxation oscillators, and sampling gates.

**UNIT-V**

**POWER AMPLIFIERS:** Classification of Power Amplifiers, Class-A, Transformer coupled Class-A, Class-B Push-pull, Complementary Class-B push-pull amplifiers.

**UNIT-VI**

**TUNED AMPLIFIERS:** Introduction, Q-factor, small signal tuned amplifiers, effect of cascading single tuned amplifier on bandwidth and stagger-tuned amplifiers.

**TEXT BOOKS:**

1. “Pulse & Digital switching waveforms” by J.Milliman & H.Taub McGraw-Hill,2nd edition 2008.
2. Design of analog CMOS Integrated circuits by Behad razhavi, McGraw-Hill,2nd edition 2001.

**REFERENCE:**

1. Solid State pulse circuits, by David A. Bell, PHI.4th edition 2008.
2. Electronic devices and circuit thoery by Boylestad, Louis Nashelsky, 9ed.,2008Pearson Education
3. Millman and Halkian,”Integrated Electronics”, McGraw-Hill.