

SARDAR PATEL UNIVERSITY
Programme: B.Sc (Electronics & Communication)
Semester: V
Syllabus with effect from: June -2013

Paper Code: US05CELC01	Total Credit: 3
Title Of Paper: Analog Circuit Design & Its Applications	

Unit	Description in detail	Weighting (%)
I	Amplifier Introduction of Amplifier, Classification of Amplifiers, Distortion in Amplifier, Frequency response of an Amplifier, Power Amplifier: Class A Operation, Class B Operation, Class AB Operation, Push Pull Amplifier, Harmonic Distortion in Power Amplifier.	
II	Feedback Amplifier Introduction of feedback Amplifier, Feedback Concepts, Types of Feedback : Series Voltage, Series Current, Shunt Voltage, Shunt Current, Voltage gain in feedback Amplifier, Circuits with Negative feedback.	
III	Oscillators Classification of Oscillators, Oscillator Principle, RC Oscillator : Phase shift Oscillator and Wein Bridge Oscillator, LC Oscillator : Colpitt's Oscillator and Hartley Oscillator, Oscillator Stability, Miller's Theorem.	
IV	IC Applications 555 Timer IC : Sailer features, Pin Diagram and functional diagram of 555 Timer IC, Astable Multivibrator and its Application, Monostable Multivibrator and its Application, Bistable Multivibrator, Schmitt Trigger.	

Basic Text & Reference Books:-

- Op-Amp & Linear Integrated Circuits – Ramakant Gayakwad.
- Basic Electronics – S.Biswas
- Electronics circuits and Devices – G.K.Mithal
- Linear integrated circuits – N.N.Bhargava, S.C.Gupta, D.C.Kulshreshta
- Integrated Electronics – Jacob Millman & W. Halkias

