SARDAR PATEL UNIVERSITY
Programme: B.Sc
Semester: II
Syllabus with effect from: November-2011

Paper Code: US02CINV01	Total Credit: 2
Title of Paper: A.C Fundamentals	

Unit	Description in detail	Weightage (%)
I	AC Fundamentals: (Frequency, Period, Phase concept), Average, Effective values, Form factor, Peak factor, Phaser representation, Vector addition / subtraction, Polar notation, Complex notation.	25%
II	Network theorem: Kirchoff's Current & Voltage law. Superposition, Maximum power transfer, Thevenin's theorem, Norton's theorem, Milman's theorem, Simple Exercise.	25%
III	A.C. Circuit: Resistance of Inductance, Energy stored in Capacitance, Series circuit, RL, RC and RLC circuits, Power triangular series parallel circuits, Admittance.	25%
IV	Resonance in A.C. Circuits: Series resonance, Frequency vibration selectivity – Q factor, half power, Frequency bandwidth – parallel resonance – Two parallel circuit – resistance, variation – resonance at all Frequencies, tuned circuits, (Exercise).	25%

Basic Text & Reference Books:

- Principles of Electrical Engineering by Vincent Del Toro (PHI)
- Electrical Technology by B L Theraja.