

HEMCHANDRACHARYA NORTH GUJARAT UNIVERSITY, PATAN

B.E. THIRD YEAR

ELECTRONICS & COMMUNICATION

(In Force June 2006)

SEMESTER – V

EC 504: ELECTRONICS COMMUNICATIONS

Teaching Scheme		Examination Scheme				
Theory Hrs.	Practical Hrs.	Theory Hrs.	Theory Marks	Pract./ Viva Marks	Term Work Marks	Total Marks
4	2	3	100	25	25	150

SYLLABUS

1. **Series & Parallel Resonance Circuits:** Series RLC ckt., Parallel tuned in effect, Mutual conductance, Coupling circuit, Passive filters.
2. **Noise:** Types of noises, Equivalent noise resistance, S/N ratio, Noise factor, Noise temperature.
3. **RF & Broadband Amplifier:** Tuned RF amplifier, Neutralization, Special RF amplifier, Frequency converter & mixer, IF amplifier, Broadband video amplifier, Class C & linear amplifier, Transmitter and amplifier matching.
4. **Oscillators:** Types of oscillators, Stability, Freq. synthesizer.
5. **Receivers:** Super heterodyne receivers, Choice of intermediate oscillator freq., Image rejection, Adjacent channel selectivity, Spurious responses, Tracking, AGC, Double conversion receivers, HF communication receivers.
6. **Analog Modulation:** Amplitude modulation, Single sideband modulation, Angle modulation.
7. **Satellite Communication:** Orbit, Station keeping, Satellite attitude, Transmission path, Path loss.
8. Audio Communication Technology Microphones, Loud Speakers, Enclosures, Design of Auditorium, Special Controls of Amplifiers, Stereophonic system, Audio tape recording, Design of Amplifiers, Hi-Fi system, Cross Over networks.

REFERENCE BOOKS:

1. Electronics Communication by Roddy & Coolen (PHI)
2. Electronics Communication by John Kennedy (TMH)
3. Audio & Video systems by R.G.Gupta (Williams –TMH)