(MDC-03) ADVANCED DIGITAL COMMUNICATION

Theory paper: 100 Marks

Sessional: 50 Marks

Digital PAM. binary PAM formats, line coding. bandlimited digital PAM systems. Nyquist pulse shaping, equalization, synchronization techniques. bit and frame synchronization. Coded pulse modulation. voice digitization rate (VDR) of PCM, DPCM. DM. ADM. CVSD. log PCM, their performance: comparison, VDR reduction by speech coding. VOCODERS. noise performance of PCM and DM, Digital multiplexes. AT & T and CCITT hierarchies. quasi-synchronous multiplexes.

Digital CW modulation, BPSK. DPSK, DEPSK. QPSK, M'ary PSK, QASK. BFSK. M~

Doubinary encoding. QPR coherent and non-coherent systems. error probabilities in ;~!

PSK, DPSK. FSK, QPSK, 16 QAM. MSK, QPR and bit. Matched correlation and optimum filters and symbol error rate. Spread Spectrum techniques: DS. CDMA, FH. PN sequence, Power requirement. PN-C sequence code. and Walsh's code.

ISDN & Value added communication system simulation & Analysis using MATLAB & Simulink Application using communication toolboxes.

Suggested Text Books and References:

1 Digital Communication By Haykins Mc Graw Hillint Editio".

2. Modern Digital & Analog Communication. By B P Lathi.. Willey Eatern Ltd. 2000.

3. Communication. Systems by A B Carlson. Tata Mc Graw Hill. 2000.