

AJK MASS COMMUNICATION RESEARCH CENTRE

P.G. DIPLOMA IN BROADCAST TECHNOLOGY

Detailed Syllabus for the Entrance Test:

- 1 Electricity and magnetism, basic definitions, units, Coulomb's law
- 2 Electric field, lines of force, electric potential, capacitance, inductance, series and parallel arrangement of resistances, capacitances and cells, Kirchoffs Law, Wheatstone bridge and application
- 3 Network theorems, heating effect of current, current carrying wire in a magnetic field, moving coil, galvanometer and ammeter, Ampere's law, Faraday's law, Lorentz Force, effect of magnetic field on current carrying conductors.
- 4 Material physics, conductors, insulators, semiconductors, PN junction, diode, transistors, FET/ MOSFET, thermistors, amplification, gain, power transfer, conversion efficiency
- 5 Opamps, integrated circuits, Oscillators, Active/ Passive Filters, Equalizers
- 6 Power Supply Systems, Inductance, Capacitance, RLC circuits, Voltage, Current, Power measurements
- 7 Transformers, types, efficiency, regulation, current and potential transformer, basic principle of waveguides, combiners, splitters, transducers, AC and DC machines,
- 8 Communication System Components, Source, transmitter, transmission system, receiver and destination, Concepts of amplitude, frequency, phase, noise, wave motion.
- 9 Propagation characteristics of sound, intensity, decibel scale, Time-domain and frequency domain concepts, data-rate, bandwidth.
- 10 Radio wave propagation, satellite and cable communication, optical communication, Analog and digital Signals, modulation and demodulation of signals, Analog and digital modulation techniques.
- 11 Boolean algebra, number system, logic operation, logic circuits, decoder and encoder, MUX/DEMUX etc. Sequential circuits, Flip-flops, registers and counters
- 12 Representation of Integers, fixed and floating point, OS, DOS & Windows Elements of IT Computer organization, basic architecture, types and characterizing features, functional units of computer.
- 13 OSI reference model, TCP/IP reference model and protocol, DNS, IP V4 and IPV6
- 14 Transmission and storage media, Internetworking concepts, standards
- 15 Network topologies (Star, Bus, Ring), Network Protocols, Wireless Transmission, Network Devices, Network Management basics
- 16 Current developments in medial, broadcasting and communication technologies, general aptitude.

Summary of Entrance Test:

S.No.	Test Components	Marks
Written Test		
01.	Objective /Multiple choice questions	20
02.	Fill in the blanks/answer in one line	50
03.	Subjective/Descriptive/Theory	100
	Interview	30