IES MASTER

Institute for Engineers (IES/GATE/PSUs)

ESE-2021 Conventional Test Schedule, Electronics & Telecomm. Eng.

Date	Topic
10th Oct. 2021	MAT-2, BEE-2, NT-2
	BEX-2, MI-3, CS-3, AET-2
17th Oct. 2021	CO-2, ADC-4, EMT-2
	MAT-2, BEE-2, NT-2, AET-1, BEX-3
24th Oct. 2021	ADC-2, ACT-2, EMT-3
	CO-2, ADC-4, BEX-2, MI-3, CS-3
31st Oct. 2021	NT-3, COMM-3
	BEX-1, BEX-3, CS-2, EMT-3, ACT-2, ADC-2
5th Nov. 2021	Full Length-1 (Test Paper-1 + Test Paper-2)
9th Nov. 2021	Full Length-2 (Test Paper-1 + Test Paper-2)
14th Nov. 2021	Full Length-3 (Test Paper-1 + Test Paper-2)

Test Type	Timing	Day
Conventional Test	10:00 A.M. to 1:00 P.M.	Sunday
Conventional Full Length Test Paper-1	10:00 A.M. to 1:00 P.M.	Tuesday
Conventional Full Length Test Paper-2	02:00 P.M. to 5:00 P.M.	Tuesday

Note : The timing of the test may change on certain dates. Prior information will be given in this regard.

***N.T. :** New Topic. ***R.T. :** Revision Topic

Call us : 8010009955, 011-41013406 or Mail us : info@iesmaster.org

Subject Code Details

Basic Electronics Engineering (BEX)	**BEX-1**	**BEX-2**	**BEX-3**	
	♦ Basics of Semiconductors ♦ Diode : Basics, Characteristics & its types ♦ BJT, JFET, MOSFET-Basic Structure & Characteristics	♦ Transistor Amplifiers ♦ Oscillators & Other circuits ♦ Basic of Linear ICs ♦ Operational Amplifier & their applications	♦ Basics of ICs; Bipolar, MOS & CMOS ICs ♦ Optical Sources / Detectors ♦ Basics of Optoelectronics & Applications	
Basic Electrical Engineering (BEE)	**BEE-1**		**BEE-2**	
	♦ Single Phase AC circuits ♦ Transformer ♦ DC Machine		♦ Induction Machine ♦ Synchronous Machine ♦ Electrical Power Sources, Basics of Batteries & its uses	
Material Science (MAT)	**MAT-1**		**MAT-2**	
	♦ Crystalline Structure ♦ Dielectric properties of matter ♦ Ceramic materials ♦ Magnetic properties of materials		♦ Insulating laminates for electronics ♦ Conductors & Superconductors ♦ Semiconductor & Optical materials ♦ Nano materials Nano-optical / Magnetic / Electronic materials	
Electronic Measurement and Instrumentation (MI)	**MI-1**	**MI-2**	**MI-3**	
	♦ Error analysis & basics of measurement ♦ Basic measuring instruments	♦ Measurement of Resistance ♦ AC Bridges ♦ Potentiometer ♦ Cathode Ray Oscilloscope (CRO) ♦ Q-meter	♦ Basics of electronic measurements ♦ Digital & electronic voltmeter ♦ Digital frequency meter ♦ Transducers & Displays ♦ Basics of Telemetry ♦ Data Acquisition System	
Network Theory (NT)	**NT-1**	**NT-2**	**NT-3**	
	♦ Network elements ♦ Network theorems ♦ 2-port networks	♦ Transient and Steady State Response ♦ Steady State Sinusoidal analysis ♦ Resonance	♦ Network Functions ♦ Magnetically Coupled Circuits ♦ Graph Theory ♦ Filters ♦ State equations for networks	
Analog and Digital Circuits (ADC)	**ADC-1**	**ADC-2**	**ADC-3**	**ADC-4**
	♦ Small Signal equivalent of Diodes, BJTs and FETs ♦ Different Diode Circuits ♦ Biasing and Stability of BJTs & JFET amplifier circuits	♦ Analysis / Design of amplifiers signal & multi-stage ♦ Feedback & its uses ♦ Active filters, timers, multipliers, wave shaping	♦ Boolean Algebra & Logic Gates ♦ Combinational circuits : Design & Applications	♦ Sequential circuits: Design & Applications ♦ Design IC Logic families ♦ A/D & D/A converters
Among and Digital Communication (COMM)	**COMM-1**	**COMM-2**	**COMM-3**	
	♦ Analog Communication Systems	♦ Digital Communication Systems	♦ Random Signals and Noise ♦ Information & Probability Theory ♦ Multiple Access-TDMA, FDMA, CDMA	
Control Systems (CS)	**CS-1**	**CS-2**	**CS-3**	
	♦ Signals and Systems ♦ System Realization ♦ Transforms & their Applications	♦ Basics of Control Systems ♦ Block Diagram & Signal Flow Graphs ♦ Time Response Analysis ♦ Routh Hurwitz criteria & Root Locus Technique	♦ Frequency Response Analysis ♦ Stability in Frequency Domain ♦ Controllers and compensators ♦ State Space Analysis	
Computer Organization and Architecture (CO)	**CO-1**		**CO-2**	
	♦ Basics of Computer Organization ♦ Operating Systems		♦ Database Management Systems ♦ Data Structure and Programming	
Electromagnetics (EMT)	**EMT-1**	**EMT-2**	**EMT-3**	
	♦ Elements of Vector Calculus ♦ Electrostatics ♦ Magnetostatics	♦ Maxwell's Equations ♦ Electromagnetic Wave propagation through different media ♦ Transmission Lines	♦ Waveguides ♦ antenna Theory	
Advanced Electronics Topics (AET)	**AET-1**		**AET-2**	
	♦ VLSI Technology ♦ VLSI Design ♦ Mealy and Moore circuit design ♦ Pipeline concept and functions ♦ Designs for tesatblity and examples		♦ Digital Signals Processing ♦ Digital Filters ♦ Speech / Audio / Radar Signal Processing ♦ Microprocessors and Microcontrollers ♦ Embedded Systems	
Advanced communication Topics (ACT)	**ACT-1**		**ACT-2**	
	♦ Communication Networks : Principles / Practices / Technologies / Uses / OSI Model / Security ♦ Basic packet multiplexed streams / scheduling ♦ Protocols (TCP / TCP-IP) ♦ Cellular Networks : Types, Analysis		♦ Microwave & Satellite Communication ♦ Fiber Optic Communication	