



# IES MASTER

Institute for Engineers (IES/GATE/PSUs)

## ESE-2021 Conventional Test Schedule, Electrical Engineering

Date	Topic
10th Oct. 2021	EM-2, PS-3
	BEX-2, MI-1, MI-3, CS-3, SSP-2, ADE-3, MC-1, MC-2
17th Oct. 2021	CF-2, PE-2
	EM-2, ECF-1, ECF-3, MI-2, PS-2, PS-3, ADE-2, CS-2
24th Oct. 2021	CF-3, MATH-3
	CF-2, ECF-2, MI-1, BEX-1, EM-1, CS-1, MI-3, CS-3, ADE-3, PE-2, SSP-1
31st Oct. 2021	
	MATH-1, MATH-3, EM-1, EM-2, ECF-1, BEX-2, CF-3, ADE-2, CS-2, PS-1, PS-3 PE-1, SSP-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. \_\_\_\_\_ Sunday

Conventional Full Length Test Paper-2 \_\_\_\_ 02:00 P.M. to 5:00 P.M. \_\_\_\_\_ Sunday

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](mailto:info@iesmaster.org)

## Subject Code Details

<b>Engineering Mathematics (MATH)</b>	<b>MATH-1</b>		<b>MATH-2</b>		<b>MATH-3</b>			
	◆ Linear Algebra ◆ Complex Variables ◆ Transform Theory		◆ Calculus ◆ Differential Equations		◆ Probability and Statistics ◆ Numerical Methods			
<b>Electrical Materials (EM)</b>	<b>EM-1</b>			<b>EM-2</b>				
	◆ Crystal Structures & Solid State ◆ Band Theory ◆ Dielectrics ◆ Magnetic materials			◆ Conductive materials ◆ Photo conductivity ◆ Nano materials ◆ Superconductors				
<b>Electric Circuits &amp; Fields (ECF)</b>	<b>ECF-1</b>		<b>ECF-2</b>		<b>ECF-3</b>			
	◆ Circuit Elements ◆ 3-phase Circuits ◆ Network Graphs ◆ Transient and steady state Response		◆ Magnetically Coupled Circuits ◆ Network Theorems ◆ Two-port networks ◆ Resonance ◆ Basic Filters		◆ Electrostatics and Magneto statics ◆ Time varying fields & Maxwell's Equations			
<b>Electrical &amp; Electronic Measurements</b>	<b>MI-1</b>		<b>MI-2</b>		<b>MI-3</b>			
	◆ Errors, Units, Dimensions & standards ◆ Galvanometers ◆ Types of Instruments ◆ Measurement of Power		◆ Measurement of Energy ◆ Measurement of resistance ◆ Potentiometers ◆ AC bridges ◆ CRO ◆ Q-meter		◆ Electronic Instrumentation ◆ Data Acquisition System ◆ Transducers			
<b>Computer Fundamentals (CF)</b>	<b>CF-1</b>		<b>CF-2</b>		<b>CF-3</b>			
	◆ Architecture, CPU, I/O, Memory, Peripheral devices ◆ Boolean algebra ◆ Number system arithmetic functions		◆ Basic of OS, Virtual memory ◆ File system ◆ Networking		◆ Data Representation and Programming, Programming languages			
<b>Basic Electronics Engineering (BEX)</b>	<b>BEX-1</b>			<b>BEX-2</b>				
	◆ Basics of diodes, BJT, FET, MOSFET			◆ Transistor amplifiers – equivalent circuits & frequency response ◆ Oscillators, Feedback amplifiers				
<b>Analog Digital Electronics (ADE)</b>	<b>ADE-1</b>		<b>ADE-2</b>		<b>ADE-3</b>			
	◆ OPAMP ◆ Multivibrator, Sample and Hold circuits ◆ Filters		◆ Digital Electronics ◆ Microprocessors		◆ Communications			
<b>Systems and Signal Processing (SSP)</b>	<b>SSP-1</b>			<b>SSP-2</b>				
	◆ Continuous & discrete-time signals ◆ Shifting and scaling ◆ Linear, time-invariant and causal system ◆ Laplace & Z-transform			◆ Fourier series ◆ Discrete Fourier Transform ◆ FFT ◆ FIR and IIR Filters ◆ Bilinear Transformation				
<b>Control System (CS)</b>	<b>CS-1</b>		<b>CS-2</b>		<b>CS-3</b>			
	◆ Basics ◆ Block diagram Algebra ◆ Signal flow ◆ Mathematical Modeling		◆ Time Response Analysis ◆ Stability ◆ Root Locus		◆ Controllers & Compensators ◆ State Variable Analysis ◆ Frequency Response & its stability			
<b>Electrical Machines (MC)</b>	<b>MC-1</b>		<b>MC-2</b>		<b>MC-3</b>		<b>MC-4</b>	
	◆ Transformers ◆ Basic concepts of Rotating Machines		◆ Polyphase Induction Machines ◆ Single Phase motors		◆ DC Machines		◆ Synchronous Machines	
<b>Power System (PS)</b>	<b>PS-1</b>		<b>PS-2</b>		<b>PS-3</b>			
	◆ Electric Power Sources-Thermal, Hydro Nuclear, Wind & Solar ◆ Performance of lines & cables ◆ HVDC & Corona ◆ Smart Grid; Environment Implications		◆ Symmetrical Components & Fault Analysis ◆ Power System stability & dynamics ◆ Load flow; Matrix Representation		◆ Economic Load Dispatch & Power Economics ◆ Load Frequency control ◆ Voltage Control & Compensation ◆ FACTS ◆ Power System Protection ◆ Solid state Relays			
<b>Power Electronics and Drivers (PE)</b>	<b>PE-1</b>				<b>PE-2</b>			
	◆ Power Semiconductor Devices ◆ High Frequency Inductors & transformers ◆ Diode Rectifiers ◆ Phase Controlled Rectifiers				◆ Choppers; DC-DC switched mode converters ◆ Inverters; DC-AC switched mode converters ◆ AC Voltage Controllers ◆ Cycloconverters ◆ Electric Drives ◆ Resonant Converters			