

<b>Updated Syllabus for Written Test and Selection Criteria for recruitment to the post of Technical Assistant (Electronics and Communication Engineering), Pay Level - 06</b>	
<b>Part – A (General)</b>	<b>Part – B (Post Related)</b>
<p><b>1. Maths &amp; Numerical Ability:</b> Averages, Profit and Loss, Time and Work, Simple Interest, Compound Interest, Decimal Fractions, Problems on Numbers, Square Root and Cube Root, Time and Distance, Simplifications, Problems on H.C.F and L.C.M, Numerical Computation etc. (Upto 10th Standard)</p> <p><b>2. Logical Reasoning:</b> Number Series Compilation, Missing Number Finding, Continuous Pattern Series, Matching Definitions, Missing Character Finding, Odd Man Out, Blood Relations, Coding And Decoding, Logical Sequence Of Words, Arithmetic Reasoning, Letter and Symbol Series, Numerical Reasoning, Data Reasoning and Data Interpretation. etc.</p> <p><b>3. Language &amp; Comprehension:</b> Antonyms, Synonyms, Spelling Check, Common Error Detection, One word substitute, correct option, Grammatical error, Change of voice, Narration, Idioms and Phrases, English Grammar, Sentence Correction and Completion, Paragraph Summary, Reading Comprehension &amp; Inferences, Spotting Errors, Sentence Improvement, Communication Skills, Sentence Formation.</p> <p><b>4. General knowledge and Current Affairs:</b> Indian History, Indian Economy, Indian Culture, Indian Polity, Indian Constitution, Indian Geography, Environmental Science, Awards and Honors, Famous Personalities, Days And Years, Basic General Knowledge, Current Affairs, Government Schemes, etc. upto 10th standard.</p> <p>5. Computer Fundamentals, MS Word, MS Excel, Power Point, Internet, Email System, etc.</p>	<p>1. Circuits, Signals and Systems -Circuit analysis: Node and mesh analysis, superposition, Thevenin's theorem, Norton's theorem, reciprocity, maximum power transfer, Linear 2-port network parameters, Star-delta transformation, Continuous-time signals: Fourier transform, sampling theorem and applications, Classification of Signals &amp; Systems, z-transform, LTI systems: definition and properties, causality, stability, impulse response, convolution, poles and zeroes, group delay, phase delay.</p> <p>2. Semiconductor Devices -Energy bands in intrinsic and extrinsic semiconductors, Carrier transport: diffusion current, drift current, continuity equations, P-N junction, Zener diode, BJT, MOSFET, LED, photo diode and characteristics.</p> <p>3. Analog Circuits: Diode circuits - clipping, clamping and rectifiers, BJT and MOSFET amplifiers, biasing, small signal analysis, Feedback concept, Classification of Feedback amplifiers, Op-amp circuits, Amplifiers, summers, differentiators, integrators, oscillators.</p> <p>4. Digital Electronics- Number representations, Boolean algebra, K maps, arithmetic circuits ,Logic families: (TTL, RTL, DTL, ECL and MOS), code converters, multiplexers, Demultiplexers, Encoders, decoders, Sequential circuits: flip-flops, counters, shift-registers, ADCs and DACs, Semiconductor memories: ROM, RAM, Cache memory, Virtual memory, Computer organization: addressing modes, instruction pipelining.</p> <p>5. Communications: Random processes -Autocorrelation and power spectral density, properties of white noise, Analog</p>

	<p>communications, amplitude modulation and demodulation, angle modulation and demodulation, spectra of AM and FM, super heterodyne receivers, Information theory, entropy, channel capacity theorem, Digital communications: PCM, DPCM, digital modulation schemes(ASK, PSK, FSK, QAM), bandwidth, inter-symbol interference. Basics of radar; Light propagation in optical fibres. Basics of Mobile Communication.</p> <p>6. Electromagnetics - Maxwell equations, Plane waves and propagations and group velocity, characteristic impedance, Wave phenomenon like polarization, Basic concepts of radiations and antenna, linear antenna arrays.</p>
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Scheme of Examination	Selection Criteria	Instructions (General Paper / Post Related)	Proficiency Test
<p><b><u>Part A - General Paper:</u></b>  Questions - 50  Marks - 50  Duration: 01 Hour</p> <p><b><u>Part B - Post Related Paper:</u></b>  Questions - 50  Marks - 50  Duration: 1:30 Hour</p>	<p>1. Written Test (Part-A): Qualifying in Nature for evaluation of part B. Qualifying marks to be decided on the basis of performance of the candidates.</p> <p>2. Written Test (Part-B): Merit list will be drawn on the basis of score of the candidate</p> <p>3. Proficiency Test: The Candidates shortlisted based on the Written Test (Part B) will be called for Proficiency Test, to be conducted after the Document Verification process.</p>	<p>1. This Part will comprise of objective-type questions with one correct answer.</p> <p>2. One (1) mark will be awarded for each correct answer &amp; minus one forth (- 1/4) mark for each incorrect answer.</p> <p>3. The unanswered questions will not attract negative marks.</p>	<p>The syllabus of the Proficiency Test will be shared with the shortlisted candidates.</p>