NHPC-JE Syllabus

General Awareness	• Current Affairs (National and International) • Indian History • Indian Geography • Indian Polity and Constitution • Economy (Indian Economy, Banking, and Finance) • Science and Technology • Environmental Issues • Culture, Sports, Awards, and Honors • Important Days, Books, and Authors
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Reasoning and General Intelligence	• Analogies • Similarities and Differences • Space Visualization • Problem Solving • Analysis, Judgment, and Decision Making • Visual Memory • Discrimination • Observation • Relationship Concepts • Arithmetical Reasoning • Verbal and Figure Classification • Arithmetical Number Series • Non-Verbal Series • Coding and Decoding

	• Statement Conclusion • Syllogistic Reasoning
Technical Section (Branch Specific) **Civil Engineering**	• Building Materials • Estimating, Costing, and Valuation • Surveying • Soil Mechanics • Hydraulics • Irrigation Engineering • Transportation Engineering • Environmental Engineering • Structural Engineering (Theory of Structures, Concrete Technology, RCC Design, Steel Design) • Water Resources Engineering • Construction Planning and Management
Electrical Engineering	• Basic Concepts of Electrical Engineering • Circuit Law • Magnetic Circuit • AC Fundamentals • Measurement and Measuring Instruments • Electrical Machines (Transformers, Induction Motors, Synchronous Machines)

	• Power Generation, Transmission, and Distribution • Estimation and Costing • Utilization of Electrical Energy • Basic Electronics • Control Systems • Electrical and Electronic Measurements • Switchgear and Protection • Power Sys
Mechanical Engineering	• Theory of Machines • Engineering Mechanics and Strength of Materials • Properties of Pure Substances • 1st and 2nd Law of Thermodynamics • Air Standard Cycles for IC Engines • IC Engine Performance • IC Engine Combustion • IC Engine Cooling & Lubrication • Rankine Cycle of Systems • Boilers • Air Compressors & their Cycles • Refrigeration and Air Conditioning • Fluid Mechanics • Dynamics of Ideal Fluids • Measurement of Flow Rate

	• Hydraulic Turbines and Centrifugal Pumps • Classification of Materials • Manufacturing Processes • Machine Design • Engineering Materials • Power Engineering
General English	• Vocabulary • Grammar • Sentence Structure • Synonyms and Antonyms • Usage of Articles, Prepositions, and Conjunctions • Active and Passive Voice • Direct and Indirect Speech • Sentence Completion • Comprehension • Error Spotting