

NPCIL Stipendiary Trainee Syllabus 2024

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The following table is a full outline of the NPCIL Stipendiary Trainee Syllabus for a number of subjects. The syllabus will also cover subjects relevant to the engineering discipline. Examine the same and adjust your study strategies accordingly.

English

Topics Covered in English Syllabus for NPCIL Stipendiary Trainee Exam	
Reading Comprehension	Jumbled Sentence
Phrase Replacement	One Word Substitution
Error Spotting	Sentence Improvement
Cloze Test	Fill in the Blanks
Wrong Spelt	Active Voice and Passive Voice
Direct and Indirect Speech	

General Knowledge/Current Affairs

Topics Covered in General Knowledge Syllabus for NPCIL Stipendiary Trainee Exam	
Directions	Arithmetical Reasoning
Judgment	Problem-Solving
Number Series	Syllogistic Reasoning
Decision Making	Visual Memory
Analogies	Non-Verbal Series

Mirror Images	Cubes and Dice
Coding-Decoding	Alphabet Series
Clocks & Calendars	

Computer Knowledge

Topics Covered in Computer Knowledge Syllabus for NPCIL Stipendiary Trainee Exam	
MS Word, Microsoft OneNote	Microsoft Access
Introduction to Computer Science	Boolean Algebra
Computer Networks	Emerging Technologies and Web Publishing
PC Software and Office Automation	Database Management System
Data Structures	MS PowerPoint
MS Visio and MS Excel	Microsoft Outlook
The Internet	Workplace Productivity Tools
MS Project, Microsoft Publisher	

Quantitative Aptitude

Topics Covered in Quantitative Aptitude Syllabus for NPCIL Stipendiary Trainee Exam	
Simplification	Pie Chart
Geometry	Fundamental Arithmetical operation
Algebra	Data Interpretation
Number System	Profit & Loss
Problem On Ages	HCF & LCM

Simple & Compound Interest	Bar Graph
Time & Speed	Pictorial Graphs
Average	Percentages
Time & Work	Statistical Charts
Mensuration	Trigonometry
Area	Investment

Mathematics

Topics Covered in Mathematics Syllabus for NPCIL Stipendiary Trainee Exam	
Relations and Functions	Logarithms
Complex Numbers	Quadratic Equations
Sequences and Series	Trigonometry
Cartesian System of Rectangular Coordinates	Statistics
Differentiation	Introduction to Three-Dimensional Geometry
Straight Lines	Circles
Conic Sections	Permutations and Combinations
Vectors	Exponential and Logarithmic Series
Sets and Set Theory	Probability Function
Limits and Continuity	Applications of Derivatives
Indefinite Integrals	Binomial Theorem

Matrices	Determinants
Definite Integrals	

Science

Topics Covered in Science Syllabus for NPCIL Stipendiary Trainee Exam	
Physical World and Measurement	Organic Chemistry
Atomic Nucleus / Solid and Semiconductor Device	Optics
Electromagnetic Waves	Mechanics of Solids and Fluids
Food	Electromagnetic Induction and Alternating Current
Metals and Non-Metals	Laws of Motion
Computer Science	Physiology and Human Diseases
Kinematics and Current Events	Electrostatics
Magnetic Effect of Current and Magnetism	Work, Energy, and Power
Principles of Communication	Nutrition and Health
Dual Nature of Matter and Radiations	Heat Thermodynamics

Computer Science Engineering

Topics Covered in Computer Science Engineering Syllabus for NPCIL Stipendiary Trainee Exam	
Knowledge of C++	Operating Systems – DOS
PHP	MS SQL Server
Oracle PL_SQL Architecture	ASP.NET

ADO.NET	Java & JavaScript
Manageable switch/ router & wireless LAN with network security	Firewall & antivirus
UML	Object-Oriented designing
Proposing and creating architecture and re-usable libraries in .NET	JavaScript
Networking with LAN/WAN	Novel
Window OS client & server & Linux OS client & server	Web Services
Window Services	JSON
Grid Computing, Distributed OS	Image processing, Digital signal processing
VLSI	Embedded System

Mechanical Engineering

Topics Covered in Mechanical Engineering Syllabus for NPCIL Stipendiary Trainee Exam	
Refrigeration and air-conditioning	Engineering Materials
Metal Casting	Turbomachinery
Operations	Thermodynamics
Numerical Methods	The Strength of Materials
Operations Research	Tool Engineering
Vector Calculus	The design of Machine Elements
Calculus	Joining Processes

Forming Processes	Fluid Mechanics
Probability & Statistics	Engineering Mechanics
Differential Equations	Theory of Machines

Electrical Engineering

Topics Covered in Electrical Engineering Syllabus for NPCIL Stipendiary Trainee Exam	
Network Analysis	Analog and Digital Electronics
Electromagnetic Theory	Instrumentation
Electronics Devices	Machines
Control Systems	Power Systems
Power System Protection	Switchgear and Protection
Power System Analysis & Control	Utilization of Energy
Power Electronics & Drives	

Electronics Engineering

Topics Covered in Electronics Engineering Syllabus for NPCIL Stipendiary Trainee Exam	
Analog Communications	Power Electronics & Drives
Digital Communications	Advanced Communications
Circuit Theory/ Digital Electronics	Analog Electronics
Basic Electronics/ Power Electronics	Computer Hardware
Measurement & Instrumentation	Microprocessors & Microcontrollers
Industrial Electronics	

Civil Engineering

Topics Covered in Civil Engineering Syllabus for NPCIL Stipendiary Trainee Exam	
Building Design and Drawing	Building Technology
Construction Management and Quantity Surveying	Economics and Management
Environmental Engineering	Environmental Studies in Civil Engineering
Functional Design of Buildings	Geomatics
Geosciences	Geotechnology
Mechanics of Fluids	Mechanics of Solids
Open Channel Hydraulics and Hydrology	Structural Analysis
Structural Design	Surveying
Transportation Engineering	Water Resources Engineering

Instrumentation Engineering

Topics Covered in Instrumentation Engineering Syllabus for NPCIL Stipendiary Trainee Exam	
Basics of Circuits and Measurement Systems	Analog Electronics
Digital Electronics	Signals, Systems, and Communications
Electrical and Electronic Measurements	Control Systems and Process Control
Analytical, Optical, and Biomedical Instrumentation	Industrial Safety
Safety, Health & Environmental Management	Safety Engineering

Safety Legislation	Occupational Health & Industrial Hygiene
Risk Management & Permit to Work System	Controlling Environment Pollution

Chemical Engineering

Topics Covered in Chemical Engineering Syllabus for NPCIL Stipendiary Trainee Exam	
Physical Chemistry	Inorganic Chemistry
Organic Chemistry	Atomic Structure
Chemical Bonding	States of Matter & Ionic Equilibrium
Thermodynamics & its Applications	Oxygen Containing Functional Groups
Electrochemistry	Organic Molecules

Physics

Topics Covered in Physics Syllabus for NPCIL Stipendiary Trainee Exam	
Electromagnetic Induction and Alternating Current	Atomic Nucleus/ Solid and Semiconductor Devices
Kinematics	Organic Chemistry
Metals and Non-Metals	Dual Nature of Matter and Radiations
Physical World and Measurement	Optics
Nutrition and Health	Electromagnetic Waves
Principles of Communication	Heat Thermodynamics
The Motion of System of Particles & Rigid Body	Laws of Motion
Magnetic Effect of Current and Magnetism	Mechanics of Solids and Fluids

Electrostatics	Physiology and Human Diseases
Work, Energy, and Power	