

DETAILED SYLLABUS OF PART A

Particulars	Syllabus - General (Part A)
General Knowledge	<ul style="list-style-type: none"> • Facts about India and other countries: Basic facts / Geography / Tourism / Transport systems / Personalities / Places / History / Constitution / Economy / Writers / Literatures / Indian States & Union Territories / International Organizations. • General Science : Branches of studies / Scientific instruments and appliances / Physics / Chemistry / Biology • Sports & Games • Important Events/ Movements / Leaders / Places / Years • Writers – Authors – Biography - Autobiography • Abbreviations
General English	<ul style="list-style-type: none"> • Spotting Errors / Vocabulary usage / Sentence Completion / Synonyms / Antonyms / Reconstruction of sentences / One word substitution / Idioms & Phrases / Grammar / Correct usage of Articles / Prepositions / Singular and Plural.
Reasoning	<ul style="list-style-type: none"> • Analogy / Classification / Series Completion / Coding-Decoding / Blood Relation / Direction Sense Test / Alphabet Test / Number and Ranking / Puzzle Test / Odd Man out / General Intelligence/Numerical ability & knowledge in Microsoft excel.
Quantitative Aptitude	<ul style="list-style-type: none"> • Number system / Fraction and Decimals / Simplification / Volume and surface areas / Square roots and Cube roots / Problems based on numbers, Speed, Time and Distance, Simple Interest / Compound Interest / Boats and Streams / Problems on Trains / Percentage - Interest / HCF and LCM / Average / Ratio and Proportion / Time and Work / Problems based on ages / Profit, Loss and Discount, Statistics / Permutations & Combinations / Probability.

DETAILED SYLLABUS OF PART B

Name of Posts	Syllabus - Discipline related (Part B)
For all posts	<ul style="list-style-type: none"> • Organisational Skills- Role of a supervisor – Manpower management & resource planning – Work force motivation – Grievance handling at shop floor level – Code of Conduct & Discipline - Importance of time keeping & productivity. • Basic knowledge of computer applications. • Supervisory Duties:- <ul style="list-style-type: none"> ➤ Principles of Organization – Principles of organization; authority; responsibility; accountability; delegation; span of control; centralization; unity of command. ➤ Motivation – Meaning of motivation; understanding human behavior; factors of motivation; levels of motivation; methods of motivating people; brief on motivation theories. ➤ Communication – Purpose of communication; communication process; methods of communication written, oral, audio – visual; report writing; channels of communication namely formal and informal; art of giving instructions; barriers of communication; guidelines for effective. • HSE & IMS- Awareness on Industrial safety & PPEs – Importance of housekeeping – Knowledge of IMS – Quality Standards – 5 S – management of industrial hazardous wastes.

In addition to the above, following are the topics included for various posts:-

Sl No.	Name of Posts	Syllabus - Discipline related (Part B)
1.	Assistant Engineer (Mechanical)	<p>Theoretical and application knowledge on</p> <ul style="list-style-type: none"> • Thermodynamics, Energy cycles, IC Engines, Four stroke & two stroke engines • Refrigeration & Air conditioning, Psychrometrics • Welding – types & defects, Gas flames, Soldering & Brazing • Manufacturing processes & Machine tools. • Corrosion & its prevention. • Renewable & Non- renewable energy sources • Pumps & its types
2.	Assistant Engineer (Electrical)	<p>Theoretical and application knowledge on</p> <ul style="list-style-type: none"> • Fundamentals of AC Systems • Basic Electrical and Electronics Concepts • Fundamentals of Analogue devices • Fundamentals of Digital circuits • Electrical Measurement and measuring instruments • Electrical Machines – DC Machines, AC Induction Machines, Synchronous Machines • Power Generation, Transmission and Distribution • Quality standards (ISO, IMS, etc) • Industrial Safety

Sl No.	Name of Posts	Syllabus - Discipline related (Part B)
3.	Assistant Engineer (Electronics)	<p>Theoretical and application knowledge on</p> <ul style="list-style-type: none"> • Basic Electronic Measuring Instruments & Transducers. Fundamentals of various communication & navigational systems • Working principle of starters , variable frequency drives at application level • Knowledge of digital control systems and automated systems • Analysis of line diagrams and drawings • Trouble shooting of PCB • Basic knowledge of OFC, communication electronics, Amplifiers, Optoelectronics, sensors, microwave • Testing & calibration techniques
4.	Assistant Engineer (Maintenance)	<p>Theoretical and application knowledge on</p> <ul style="list-style-type: none"> • Engineering Mechanics • Fluid Machines • Management Information System • Metrology and Inspection • Production/Manufacturing Engineering • Strength of Materials • Theory of Machines • Thermodynamics • Industrial Engineering & Management • Preventive, Planned, Shutdown/breakdown maintenance of cranes, machineries, pumps, valves, compressors, welding machines etc in heavy engineering & fabrication industry. <p>Trouble Shooting of various mechanical equipments and general idea about the functioning of its various components. Spare part control and management.</p>
5.	Assistant Administrative Officer	<ul style="list-style-type: none"> • Basic Knowledge about Personnel Management & Industrial Relations. • Work culture. • Employee coordination & Manpower Management. • Resource Planning. • Disciplinary proceedings / Grievance handling. • Time Management. • Office Management and procedures. • Familiarity with Word. <ul style="list-style-type: none"> • Familiarity with Excel:- <ul style="list-style-type: none"> ➤ Entering, Editing and Formatting Data ➤ Formatting Numbers ➤ Managing Worksheets ➤ Modifying Rows and Columns ➤ Understanding Formulas ➤ Changing Views ➤ AutoFill and Custom Lists ➤ Conditional Formatting

Sl No.	Name of Posts	Syllabus - Discipline related (Part B)
		<ul style="list-style-type: none"> ➤ Tables ➤ Data Tools ➤ Referencing Formulas ➤ Ranges and Dates ➤ Lookups ➤ Conditional Logic ➤ Text Formulas ➤ Introduction to Charts ➤ Formatting Charts ➤ Adding Graphics to Spreadsheets ➤ Outline, Sort, Filter, and Subtotal ➤ PivotTables ➤ Protecting Data ➤ Printing ➤ Saving a Workbook
6.	Assistant Fire Officer	<p><u>Theoretical and application knowledge on</u></p> <ul style="list-style-type: none"> • Basics of Fire-Physics and Chemistry of fire • Hose, hose fittings, Branches and nozzles • Ladders • Pumps and primers • Portable fire extinguishers, Performance and construction as per IS 15683 • Foam and foam making branches • Fixed fire fighting installations • Respiratory supporting systems in fire services (including SCBA set) • Gas fire • Fire service hydraulics • Plan reading • Explosives • Hazards of Chemicals, MSDS • Storage of hazardous goods, Petroleum etc • Electricity- basic concepts • Different types of extinguishing media • Practical fireman ship • Hydrants and water relay • Automatic Fire detection and alarm systems • First aid, Resuscitation and CPR • Sprinkler and drenchers • Building construction- definitions as per NBC part-IV • Important rescue tools • Fire fighting appliances • Global warming and environmental protection- green house gases and ozone depletion
7.	Accountant	<p><u>Theoretical and application knowledge on</u></p> <ul style="list-style-type: none"> • Financial Accounting • Trading & Profit & Loss Accounts and Balance Sheet

SI No.	Name of Posts	Syllabus - Discipline related (Part B)
		<ul style="list-style-type: none"> • Bank Reconciliation Statement • Depreciation, Reserves and Reserve Funds, Ratio Analysis • Capital and Revenues, Revenue Accounts, Receipts & payments Accounts, Income & Expenditure Accounts • Company Accounts • Financial Statements and Reporting • Cost Accounting, Cost Records and Cost Audit • Direct and Indirect Taxes- Income Tax Act, Central Sales Tax Act, Service Tax Act, Central Excise Act • Contracts Act, Payment of Gratuity Act, Payment of Bonus Act, ESI Act, EPF Act. • Companies Act, Factories Act, ID Act • FEMA, SCRA and SEBI Act. • Company Audit, preparation of Auditors Report and other requirements. • Familiarity with Word. • <u>Familiarity with Excel:-</u> <ul style="list-style-type: none"> ➤ PivotTables and Charts ➤ Lookups, Ranges and Dates ➤ Conditional Formatting ➤ Managing Worksheets ➤ Built formulas and Understanding Formulas ➤ Changing Views ➤ AutoFill and Custom Lists ➤ Conditional Logic, Tables & Data Tools ➤ Referencing Formulas ➤ Ranges and Dates ➤ Introduction & Formatting Charts ➤ Adding Graphics to Spreadsheets ➤ Outline, Sort, Filter, and Subtotal ➤ Protecting Data ➤ Printing ➤ Saving a Workbook