



**NATIONAL INSTITUTE OF TECHNOLOGY ANDHRA PRADESH**  
**RECRUITMENT FOR NON-TEACHING POSITIONS**  
**(SYLLABUS FOR WRITTEN EXAMINATION)**

S.NO	NAME OF THE POST	SYLLABUS
1.	<b>1. Attendant</b> <b>2. Security Guard</b> <b>3. Mali</b>	<p><b>1.Aptitude-</b> Simplifications, Average, Number System , Profit and Loss, Time and Work, Calendar, Time and Distance, Problems On Ages, Interest, Percentages and Ratio.</p> <p><b>2.Reasoning-</b> Number Series Completion, Missing Number Finding , Continuous Pattern Series, Direction Sense Test, Classification, Series Completion, Odd Man Out, Blood Relations, Coding And Decoding, Syllogisms, Statements and Conclusion, Logical Problems.</p> <p><b>3.General English-</b> Antonyms, Synonyms, Spelling Check, Change of Voice, Spotting Errors, Statement Improvement, One Word Substitutes, Sentence Correction, Common Error Detection, Idioms and Phrases.</p> <p><b>4.GK-</b> Indian History, Sports, Books And Authors, Famous Personalities, Days and Years, World Geography, Basic General Knowledge, Inventions, Awards And Honors And Basic Computer Knowledge.</p>
2.	<b>1. Junior Assistant</b> <b>2. Senior Assistant</b> <b>3. Stenographer</b>	<p><b>1.Aptitude-</b>Averages, Number System, Profit and Loss, Time and Work, Problems on Trains, Calendar, Area, Problems on Numbers, Square Root and Cube Root, Interest, Percentage, Ratio, Time and Distance, Problems on Ages, Clock, Simplifications, Odd Man Out Series.</p> <p><b>2.Reasoning-</b> Number Series Compilation, Missing Number Finding, Continuous Pattern Series, Direction Sense Test, Series Compilations, Classification, Missing Character Finding, Odd Man Out, Blood Relations, Analogy, Coding And Decoding, Syllogisms, Letter And Symbol Series, Verbal Reasoning, Statement And Conclusions, Letter And Symbol Series, Logical Problems, Arithmetic Reasoning, Logical Sequence of Words, Analogies.</p> <p><b>3.General English-</b> Antonyms, Synonyms, Spelling Check, Active/Passive Voice, Spotting Errors, Sentence Improvement, One Word Substitutes, Selecting Words, Sentence Corrections, Idioms And Phrases, Common Error Detection, Ordering Of Words, Verbal Analogies, Sentence Formation, Completing Statements, Change of Speech.</p> <p><b>4.GK-</b> Indian History, Indian Economy, Indian Culture, Sports, Books and Authors, Famous Personalities, World Geography, Days And Years, Environmental Science, General Science, Inventions, Basic General Knowledge, Awards And Honors, Famous Places In India, World Organization, Current Affairs.</p> <p><b>5.Data Interpretation:</b> Pie Chart, Bar Chart.</p> <p><b>6.Computer Fundamentals,</b> Operating System, MS Word, MS Excel, Power Point.</p>
4.	<b>1. Superintendent</b> <b>2. Accountant</b>	<p><b>1.Aptitude-</b> Averages, Number System, Profit and Loss, Time and Work, Problems on Trains, Compound Interest, Decimal Fractions, Calendar, Area, Problems on Numbers, Square Root and Cube Root, Boats and Streams, Probability, Interest, Percentage, Ratio, Time and Distance, Problems on Ages, Partnership, Clock, Simplifications, Volume and Surface, Problems on H.C.F and L.C.M, Logarithms, Chain Rule, Pipes and Cistern, Odd Man Out and Series, Heights and Distances.</p> <p><b>2.Reasoning-</b> Number Series Compilation, Missing Number Finding, Continuous Pattern Series, Direction Sense Test, Puzzle, Verbal Classification, Matching Definitions, Logical Deduction, Series Compilations, Classification, Missing Character Finding, Odd Man Out, Blood Relations, Analogy, Coding And Decoding, Truth Verification Of The Statement, Syllogisms, Analogies, Verbal Reasoning, Statement And Conclusions, Letter And Symbol Series, Logical Problems, Logical Sequence Of Words, Arithmetic Reasoning, Data Sufficiency.</p> <p><b>3.General English-</b> Antonyms, Synonyms, Spelling Check, Change of voice, Spotting Errors, Sentence Improvement, One Word Substitute, Selecting Words, Sentence Corrections, Idioms And Phrases, Communication Skills, Common Error Detection, Sentence Compilation, Ordering of Words, Ordering of Sentences,</p>

		<p>Verbal Analogies, Sentence Formation, Completing Statements, Change of Speech.</p> <p><b>4.Data Interpretation:</b>Pie Chart, Bar Chart, Line Chart, Table Chart</p> <p><b>5.GK-</b> Indian History, Indian Economy, Indian Culture, Environmental Science, Awards and Honors, Famous Places In India, World Organization, Sports, Books And Authors, Famous Personalities, Days And Years, World Geography, Basic General Knowledge, Physics, Biology, Indian Politics, Indian Geography, General Science, Chemistry, Technology, Inventions, Current Affairs</p> <p><b>6.</b> Computer Fundamentals, Operating System, MS Word, MS Excel, Power Point, Tally.</p> <p><b>7.</b> Commercial Accountancy.</p> <p><b>8.</b> Office Management and Procedures.</p>
5.	<p><b>1.TechnicalAssistant</b></p> <p><b>2. Senior Technical Assistant</b></p> <p><b>3.Junior Engineer</b></p> <p><b>4. Assistant Engineer</b></p> <p><b>5.Senior Pharmacist</b></p>	<p><b>1. Aptitude-</b> Averages, Number System, Profit and Loss, Time and Work, Problems on Trains, Compound Interest, Decimal Fractions, Calendar, Area, Problems on Numbers, Square Root and Cube Root, Boats and Streams, Probability, Interest, Percentage, Ratio, Time And Distance, Problems on Ages, Partnership, Clock, Simplifications, Volume and Surface, Problems on H.C.F And L.C.M, Logarithm, Chain Rule, Pipes and Cistern, Odd Man Out and Series, Height and Distance.</p> <p><b>2. Reasoning-</b> Number Series Compilation, Missing Number Finding, Continuous Pattern Series, Direction Sense Test, Puzzle, Verbal Classification, Matching Definitions, Logical Deduction, Series Compilations, Classification, Missing Character Finding, Odd Man Out, Blood Relations, Analogy, Coding And Decoding, Truth Verification Of The Statement, Syllogisms, Analogies, Verbal Reasoning, Statement And Conclusions, Letter And Symbol Series, Logical Problems, Logical Sequence Of Words, Arithmetic Reasoning, Data Sufficiency.</p> <p><b>3. General English-</b> Antonyms, Synonyms, Spelling Check, Change of Voice, Spotting Errors, Sentence Improvement, One Word Substitute, Selecting Words, Sentence Corrections, Idioms and Phrases, Communication Skills, Common Error Detection, Sentence Compilation, Ordering of Words, Ordering of Sentences, Verbal Analogies, Sentence Formation, Completing Statements, Change of Speech.</p> <p><b>4. Data Interpretation:</b> Pie Chart, Bar Chart, Line Chart, Table Chart</p> <p><b>5. GK-</b> Indian History, Indian Economy, Indian Culture, Environmental Science, Awards And Honors, Famous Places In India, World Organization, Sports, Books And Authors, Famous Personalities, Days And Years, World Geography, Basic General Knowledge, Physics, Biology, Indian Politics, Indian Geography, General Science, Chemistry, Technology, Inventions, Current Affairs.</p> <p><b>6.</b> Computer Fundamentals, Operating System, MS Word, MS Excel, Power Point</p> <p><b>7. Basic Engineering (Technical Assistant/Senior Technical Assistant &amp; Junior Engineer/Assistant Engineer) – Refer Annexure – I (at the end of this document).</b></p> <p><b>8. Basic Pharmacy (Senior Pharmacist):</b> Pharmaceutics, Pharmaceutical Chemistry, Pharmacognosy, Biochemistry &amp; Clinical Pathology, Human Anatomy &amp; Physiology, Health Education &amp; community pharmacy, Pharmacology &amp; Toxicology, Pharmaceutical Jurisprudence, Drug store and Business Management, Hospital &amp; Clinical Pharmacy.</p>

7.	<p><b>1. Technician</b></p> <p><b>2. Senior Technician</b></p> <p><b>3. Work Assistant</b></p> <p><b>4. Senior Work Assistant</b></p> <p><b>5. Laboratory Assistant</b></p>	<p><b>1. Aptitude-</b> Averages, Number System, Profit and Loss, Time and Work, Problems on Trains, Calendar, Area, Problems on Numbers, Square Root and Cube Root, Interest, Percentage, Ratio, Time and Distance, Problems on Ages, Clock, Simplifications, Odd Man Out Series</p> <p><b>2. Reasoning-</b> Number Series Compilation, Missing Number Finding, Continuous Pattern Series, Direction Sense Test, Series Compilations, Classification, Missing Character Finding, Odd Man Out, Blood Relations, Analogy, Coding and Decoding, Syllogisms, Letter and Symbol Series, Verbal Reasoning, Statement and Conclusions, Letter and Symbol Series, Logical Problems, Arithmetic Reasoning, Logical Sequence of Words.</p> <p><b>3. General English-</b> Antonyms, Synonyms, Spelling Check, Change of Voice, Spotting Errors, Sentence Improvement, One Word Substitutes, Selecting Words, Sentence Corrections, Idioms and Phrases, Common Error Detection, Ordering of Words, Change of Speech, Verbal Analogies, Sentence Formation, Completing Statements.</p> <p><b>4. GK-</b> Indian History, Indian Economy, Indian Culture, Sports, Books and Authors, Famous Personalities, World Geography, Days and Years, Environmental Science, General Science, Inventions, Basic General Knowledge, Awards and Honors, Famous Places In India, World Organization, Current Affairs.</p> <p><b>5. Computer Fundamentals,</b> Operating System, MS Word, MS Excel, Power Point</p> <p><b>6. Basic Engineering (Technician/Senior Technician &amp; Work Assistant/Senior Work Assistant) – Refer Annexure – I (at the end of this document).</b></p> <p><b>7. Basic Sciences (Lab Assistant):</b>  <i>Physics:</i> Nature of Universe-General Scientific laws-Inventions and discoveries-National scientific laboratories-Mechanics and properties of matter-Physical quantities, standards and units-Force, motion and energy Magnetism, electricity and electronics -Heat, light and sound.  <i>Chemistry:</i> Elements and Compounds-Acids, bases and salts-Fertilizers, pesticides, insecticides  <i>Botany:</i> Main Concepts of life science-Classification of living organism, Nutrition and dietetics-Respiration  <i>Zoology:</i> Blood and blood circulation-Reproductive system-Environment, ecology, health and hygiene-Human diseases including communicable and non – communicable diseases - prevention and remedies-Animals, plants and human life</p> <p><b>8. Basic Knowledge of Laboratories</b></p>
8.	<b>Assistant Registrar</b>	<p><b>1. Aptitude-</b>Averages, Number System, Profit and Loss, Time and Work, Problems on Trains, Compound Interest, Decimal Fractions, Calendar, Area, Problems on Numbers, Square Root and Cube Root, Boats and Streams, Probability, Interest, Percentage, Ratio, Time and Distance, Problems on Ages, Partnership, Clock, Simplifications, Volume and Surface, Problems on H.C.F and L.C.M, Logarithm, Chain Rule, Pipes and Cistern, Odd Man Out and Series, Height and Distance</p> <p><b>2. Reasoning-</b> Number Series Compilation, Missing Number Finding, Continuous Pattern Series, Direction Sense Test, Puzzle, Verbal Classification, Matching Definitions, Logical Deduction, Series Compilations, Classification, Missing Character Finding, Odd Man Out, Blood Relations, Analogy, Coding and Decoding, Truth Verification of The Statement, Syllogisms, Analogies, Verbal Reasoning, Statement And Conclusions, Letter and Symbol Series, Logical Problems, Logical Sequence Of Words, Arithmetic Reasoning, Data Sufficiency.</p> <p><b>3. General English-</b> Antonyms, Synonyms, Spelling Check, Change of Voice, Spotting Errors, Sentence Improvement, One Word Substitute, Selecting Words, Sentence Corrections, Idioms And Phrases, Communication Skills, Common Error Detection, Sentence Compilation, Ordering of Words, Ordering of Sentences, Verbal Analogies, Sentence Formation, Completing Statements, Change of Speech.</p> <p><b>4. Data Interpretation:</b> Pie Chart, Bar Chart, Line Chart, Table Chart</p>

		<p><b>5.GK-</b> Indian History, Indian Economy, Indian Culture, Environmental Science, Awards And Honors, Famous Places In India, World Organization, Sports, Books And Authors, Famous Personalities, Days And Years, World Geography, Basic General Knowledge, Physics, Biology, Indian Politics, Indian Geography, General Science, Chemistry, Technology, Inventions, Current Affairs.</p> <p><b>6.</b>Computer Fundamentals, Operating System, MS Word, MS Excel, Power Point, Tally</p> <p><b>7. CCS Conduct Rules:</b> Office procedure, Do's and Don'ts, conduct and commissions which amount to misconduct, activities requiring permission/sanction, activities not requiring permission/sanction, prohibition of sexual harassment of working women, office procedure, general condition of service, Deputation, Lien, Travelling allowance rules, types of advances, leave RULES, ITC RULES, Medical Attendance rule, RTI Act-2005.</p> <p><b>8. Matter related to Academics:</b> Grade Point System, Technical Education in India, its governance, Policy and Administration, Examination regulations, Accreditation etc..</p> <p><b>9. NIT Act &amp; Statutes:</b> NIT Act/Statutes, NITSER act, Role and Functions of board, Finance Committee, Building and Works Committee, Senate, NIT council, Powers of the Institute, Authorities of the Institute, Accounts &amp; Audit, Director, deans, HOD's/HOC's, code of conduct for permanent employees, resignation &amp; Retirement.</p> <p><b>10. Management &amp; Accounting:</b> Inventory management, Role of DDO, Income tax, Service tax rules, Procurement of goods and services, contract management, audit of autonomous bodies, C&amp;AG etc, balance sheet, trial balance, ledgers and posting, bank reconciliation statement, receipt &amp; Payments, preparation of budget and its allocation, GPF rules, Pension rules, GFR-2017, New Pension Scheme, knowledge of tally, etc..</p>
9.	<b>Assistant Librarian</b>	<p><b>1.Apptitude-</b>Averages, Number System, Profit and Loss, Time and Work, Problems on Trains, Compound Interest, Decimal Fractions, Calendar, Area, Problems on Numbers, Square Root and Cube Root, Boats and Streams, Probability, Interest, Percentage, Ratio, Time And Distance, Problems on Ages, Partnership, Clock, Simplifications, Volume and Surface, Problems on H.C.F and L.C.M, Logarithm, Chain Rule, Pipes and Cistern, Odd Man Out and Series, Height and Distance</p> <p><b>2.Reasoning-</b> Number Series Compilation, Missing Number Finding, Continuous Pattern Series, Direction Sense Test, Puzzle, Verbal Classification, Matching Definitions, Logical Deduction, Series Compilations, Classification, Missing Character Finding, Odd Man Out, Blood Relations, Analogy, Coding And Decoding, Truth Verification Of The Statement, Syllogisms, Analogies, Verbal Reasoning, Statement And Conclusions, Letter And Symbol Series, Logical Problems, Logical Sequence Of Words, Arithmetic Reasoning, Data Sufficiency.</p> <p><b>3.General English-</b> Antonyms, Synonyms, Spelling Check, Change of Voice, Spotting Errors, Sentence Improvement, One Word Substitute, Selecting Words, Sentence Corrections, Idioms And Phrases, Communication Skills, Common Error Detection, Sentence Compilation, Ordering of Words, Ordering of Sentences, Verbal Analogies, Sentence Formation, Completing Statements, Change of Speech.</p> <p><b>4.Data Interpretation:</b>Pie Chart, Bar Chart, Line Chart, Table Chart.</p> <p><b>5.GK-</b> Indian History, Indian Economy, Indian Culture, Environmental Science, Awards And Honors, Famous Places In India, World Organization, Sports, Books And Authors, Famous Personalities, Days And Years, World Geography, Basic General Knowledge, Physics, Biology, Indian Politics, Indian Geography, General Science, Chemistry, Technology, Inventions, Current Affairs.</p> <p><b>6.</b>Computer Fundamentals, Operating System, MS Word, MS Excel, Power Point, Library Information System.</p>

## ANNEXURE-I

### Basic Science and Engineering - Syllabus

#### **Units and Measurement**

• Definition • Classifications: Fundamental and Derived units • Systems of units: FPS, CGS, MKS • Units of physical quantities, symbols • Conversion factors • Measurement of mechanical quantities, electrical quantities • Related problems

#### **Mass Weight and Density**

• Definition • Comparison between mass and weight • Comparison between density and relative density/specific gravity • Volume of different geometries (Cube, Cylinder, Cone, Sphere etc.) • Related problems

#### **Work Power and Energy**

• Definition • Work and its Units, Measurement of work • Work done on bodies moving on horizontal and inclined planes (consider frictional forces also) Concept of Power and its units, Calculations of power (simple cases) • Concept of Kinetic energy and potential energy, Expressions for P.E and K.E • Principle of conservation of energy • Related problems

#### **Speed and Velocity**

• Definition of speed, velocity and their comparison • Scalar and Vector quantity • Average Velocity, Acceleration & Retardation • Equations of motion • Circular Motion: Relation between circular motion and Linear motion • Related problems

#### **Heat and Temperature**

• Definition • Specific Heat and Thermal Capacity • Types of heat: Sensible Heat, Latent Heat • Difference between heat and temperature • Different temperature scales and conversions • Temperature measuring instruments

#### **Basic Electricity**

• Source of electricity: Battery, Generator, Thermocouple • Types of electric current: Direct current, Alternate current • Difference between AC and DC • Electrical Terms and units • Ohm's Law, Kirchoff's law Relationships between Current, Volt, Resistance and Power • Resistance connections, Simple Problems on series and parallel circuits • Insulators: Properties and Classification • Conductors: Properties and Classification • Electric Power, Horse Power, Work and energy

#### **Levers and Simple Machines**

• Definitions • Velocity ratio, Mechanical Advantages, Efficiency and relationships • Ideal Machines • Lever: Principle, Types (First order lever, Second order lever, Third order lever) • Relationship, law of machine, simple machines

#### **Occupational Safety, Health**

• Safety & Health: Introduction and Importance of Occupational Safety and Health • Occupational Hazards: Basic Hazards, Chemical Hazards, Vibroacoustic Hazards, Mechanical Hazards, Electrical Hazards, Thermal Hazards. Occupational health, Occupational hygienic, Occupational Diseases/ Disorders & its prevention • Accident & safety: Basic principles for protective equipment, Accident Prevention techniques – control of accidents and safety measures • First Aid: Care of injured & Sick at the workplaces, First-Aid & Transportation of sick person • Basic Provisions: Idea of basic provision of safety, health, welfare under legislation of India

#### **Environment Education**

• Ecosystem: Introduction to Environment, Relationship between Society and Environment, Ecosystem and Factors causing imbalance • Pollution: Pollution and pollutants including liquid, gaseous, solid and hazardous waste • Energy Conservation: Conservation of Energy, re-use and recycle • Global warming: Global warming, climate change and Ozone layer depletion • Ground Water: Hydrological cycle, ground and surface water, Conservation and Harvesting of water • Environment: Right attitude towards environment, Maintenance of in-house environment.

#### **I.T. Literacy**

• Computer: Introduction, Computer and its applications, Hardware and peripherals, switching on and shutting down of computer • WINDOWS: Basics of Operating System, WINDOWS, Create, Copy, Move and delete Files and Folders, Use of External memory like pen drive, CD, DVD etc. • MS office: Basic operations of Word Processing (Cut /Copy /Paste/ Formatting), Basics of Excel worksheet (Commands/simple formulas and functions) • INTERNET: Computer Networks (LAN/WAN), Applications of Internet (Browsing, Searching, Emailing, Social Networking) • WEB Browser: World Wide Web (WWW), Web Browsing, Information Security and antivirus tools, Awareness of IT – ACT, Importance of information security and IT act, types of cyber crimes.

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