

**Broad Topics for Stage-I (Written Examination)**

Name of Post	Subject/ Field	Topics
<b>Aviator-II</b>	Aviation Technology	Physical World and Measurement, Kinematics: (Motion in a straight line and Motion in a Plane), Laws of Motion, Work, Energy and Power, Motions of System of Particles and Rigid Body, Gravitation, Properties of Bulk Matter, Thermodynamics, Behavior of Perfect Gases and Kinetic Theory of Gases, Oscillations and Waves, Electrostatics, Current Electricity, Magnetic Effects of Current and Magnetism, Electromagnetic Induction and Alternating Currents, Electromagnetic Waves, Optics, Dual nature of Radiation and Matter, Atoms and Nuclei, Electronic Devices, Radar, Navigational aids, electronics communication, aerodynamics, Sets, Relations & Functions, Trigonometric Functions, Complex Numbers and Quadratic Equations, Linear Inequalities, Permutations and Combinations, Binomial Theorem, Sequence and Series, Straight Lines, Conic Sections, Limits and Derivatives, Statistics, Probability, Relations and Functions, Inverse Trigonometric Functions, Matrices, Determinants, Continuity and Differentiability, Applications of Derivatives, Integrals, Applications of the Integrals, Differential Equations, Vectors and Three-Dimensional Geometry, Three - dimensional Geometry, Linear Programming, Probability, History of Computers and their classification, Data Structure & Algorithms, Operating System, Database Management System, Basics of networking and cyber security, Mental Ability & Reasoning.
<b>Technical Assistant</b>	Computer Science & Information Technology	Database Concepts, Digital Logic, Computer Organization and Architecture, Programming concepts (Java/ C/ C+/ Bash) and Data Structures, Algorithms, Data Analytics Languages (Python3 / R), AI/ ML, Big Data Analytics, Theory of Computation, Compiler Design, Operating System, Networking Concepts, Information & Cyber Security Concepts, Number Theory, Algebra, Probability and Statistics, Information Theory and Cryptology, Mental Ability & Reasoning.
	Electronics & Communication	Electronic Devices & Circuits, Digital Electronics, Circuit Theory & transient analysis, Analog communication, Digital Communication, Electromagnetic Theory & Antenna, Radar, Satellite Communication, Optical fiber Communication, Data Communication & Networking, Mobile Communication, Electrical Systems & Control, Digital Signal Processing, Electrical & Electronic Measurement & Testing, Computer Architecture & Organization, Mathematics, Mental Ability & Reasoning.