

**SYLLABUS FOR ARTIFICER APPRENTICES  
AND SENIOR SECONDARY RECRUITS**

| <b>SL NO</b> | <b>SCIENCE</b>   | <b>MATHEMATICS</b>  | <b>ENGLISH</b>   | <b>GENERAL AWARENESS</b>  |
|--------------|--|---|--|---|
| 0.1          | Physical World and Measurement, Kinematics, Laws of Motion, Work, Energy and Power, Motion o System of Particles and Rigid Body/ Gravitation | Relations and Functions, Logarithms, Complex Numbers, Quadratics Equations, Sequences and Series, Trigonometry                        | Passage, Preposition, Correction of sentences, Change active to passive/ passive to active voice | Culture and Religion, Geography : Soil, Rivers, Mountains, Ports, Inland Harbours, Freedom Movement   |
| 02.          | Mechanics of Solids and Fluids, Heat Thermodynamics, Oscillations, Waves, Electrostatics, Current Electricity                                | Cartesian System of Rectangular Coordinates, Straight Lines Family of Straight Lines, Circles   | Change direct to indirect/indirect to direct, Verbs/Tense/Non Finites, Punctuation               | Sports : Championships/ Winners/ Terms/ No of Players, Defence, Wars and Neighbours, current Affairs  |
| 03.          | Magnetic Effect of Current and magnetism, Electromagnetic Induction and Alternating Current, Electromagnetic Waves                           | Conic Section, Permutations and Combinations, Vectors, Exponential and Logarithmic Series, Sets and Set Theory, Statistics            | Substituting phrasal verbs for expression, Synonyms and Antonyms, Meanings of difficult words    | Important National Facts about India-Heritage, Arts, Dance, History, National-Languages, Bird, Animal, Song, Flag, Monuments, Capitals & Currencies |
| 04.          | Optics, Dual Nature of Matter and Radiations, Atomic Nucleus/ Solid and Semi-Conductor Devices, Principles of Communication                  | Introduction to Three-Dimensional Geometry, Probability Function, Limits and Continuity, Differentiation, Applications of Derivatives | Use of adjective, Compound preposition, Determiners (use of a, the, any etc), Use of pronouns    | Common Names, Full forms and Abbreviations, Discoveries, Diseases and Nutrition, Award and Authors, Eminent Personalities                           |
| 05.          | Metals and Non Metals, Organic Chemistry, Food, Nutrition and Health, Physiology and Human Diseases, Computer Science                        | Indefinite Integrals Binomial Theorem, Matrices, Determinants, Definite Integrals   |  | Spatial, Numerical, Reasoning & Associative Ability, Sequences, Spellings Unscrambling, Coding and Decoding   |