

**Department of Technology**  
**Savitribai Phule Pune University**

**Name of course – Certificate Course in Introduction To Drone Technology**

**Syllabus for Entrance Examination**

**Part – A**

**General Aptitude**

- Test of Reasoning
- Verbal Analogies
- Numerical Ability
- English Grammar
- Verbal Deductions
- Word Groups
- Structural Orientation

**Part – B**

**Maths**

- Percentage
- Decimals
- Factors and Multiples
- Ratios
- Geometry
- Integers
- Number System
- Simplification
- HCF and LCM
- Ratio and Proportion
- Problems on Age
- Partnership
- BODMAS
- Average
- Profit and Loss
- Simple Interest and Compound Interest
- Mensuration
- Time and Work
- Time and Distance
- Square Root
- Trigonometry
- Approximation
- Mixture and Allegation
- Permutation and Combination
- Boats and Streams

- Surds and Indices
- Pipes and Cistern

## Physics

- Physical Properties and States of Matter
- Modes of transference of Heat
- Mass, Weight, Volume, Sound waves and their properties
- Simple musical instruments
- Rectilinear propagation of Light
- Density and Specific Gravity
- Reflection and refraction
- Principle of Archimedes
- Spherical mirrors and Lenses
- Pressure Barometer
- Human Eye
- Motion of objects
- Natural and Artificial Magnets
- Velocity and Acceleration
- Properties of a Magnet
- Newton's Laws of Motion
- Earth as a Magnet
- Force and Momentum
- Static and Current Electricity
- Parallelogram of Forces
- Conductors and Non-conductors
- Stability and Equilibrium of bodies
- Ohm's Law
- Gravitation
- Simple Electrical Circuits
- Elementary ideas of work
- Heating, Lighting, and Magnetic effects of Current
- Power and Energy
- Measurement of Electrical Power
- Effects of Heat
- Primary and Secondary Cells
- Measurement of Temperature and Heat
- Use of X-Rays
- General Principles in the working of Simple Pendulum, Simple Pulleys, Siphon, Levers, Balloon, Pumps, Hydrometer, Pressure Cooker, Thermos Flask, Gramophone, Telegraphs, Telephone, Periscope, Telescope, Microscope, Mariner's Compass; Lightning Conductors, Safety Fuses.

## Geography

- The Earth, its shape and size
- Ocean Currents and Tides Atmosphere and its composition
- Latitudes and Longitudes
- Temperature and Atmospheric Pressure, Planetary Winds, Cyclones, and Anticyclones; Humidity; Condensation and Precipitation

- Concept of time
- Types of Climate
- International Date Line
- Major Natural Regions of the World
- Movements of Earth and their effects
- Regional Geography of India
- Climate, Natural vegetation. Mineral and Power resources;
- Location and distribution of agricultural and Industrial activities
- Origin of Earth. Rocks and their classification
- Important Sea ports and main sea, land, and air routes of India
- Weathering—Mechanical and Chemical, Earthquakes and Volcanoes
- Main items of Imports and Exports of India

### General Science

- Common Epidemics, their causes, and prevention
- Difference between the living and non-living
- Food—Source of Energy for man
- Basis of Life—Cells, Protoplasm, and Tissues
- Constituents of food
- Growth and Reproduction in Plants and Animals
- Balanced Diet
- Elementary knowledge of the Human Body and its important organs
- The Solar System—Meteors and Comets, Eclipses. Achievements of Eminent Scientists

### English

- Rules For Tenses
- Rules For Prepositions
- List of Prepositions
- Rules and List of Conjunctions
- Active And Passive Voice Rules
- List of One Word Substitutions
- List of Homophones/Homonyms
- List of Synonyms and Antonyms
- Idioms And Phrases
- Spotting the Error
- Reading Comprehension
- Cloze Test
- Letter Writing Format
- Precis Writing
- Sentence Correction Questions
- Adjective Degree Of Comparison Rules
- Article Rules
- Direct & Indirect Speech Rules
- Sentence Rearrangement & Para jumbles



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Head

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