

## SYLLABUS FOR HAVALDAR SURVEYOR AUTO CARTO

### 1. Pattern

Ser No	Parts	Subject	Questions	Marks	Pass Marks	Remarks
(a)	Part-I	Maths	50	100	100	Min 40 marks in Part-I and min 40 marks in Part-II
(b)		Physics	25	50		
(c)	Chemistry	25	50			

### 2. Syllabus.

#### (a) Mathematics.

- (i) Algebra, Vector Algebra & Trigonometry
- (ii) Matrices & Determinants.
- (iii) Analytical & 3D Geometry.
- (iv) Integral & Differential Calculus.
- (v) Probability and Statistics.
- (vi) Number Systems & Complex numbers
- (vii) Fundamental arithmetical operations & Mensuration
- (viii) Area, Volume and Surface Area
- (ix) Binomial theorem & Sequence and series
- (x) Permutation and Combination

(b) **Physics** : Physical Properties and States of Matter, Mass, Weight, Volume, Density and Specific Gravity, Principle of Archimedes, Pressure Barometer, Motion of objects, Velocity and Acceleration, Newtons Laws of Motion, Force and Momentum, Parallelogram of Forces, Stability and Equilibrium of bodies, Gravitation, elementary ideas of work, Power and Energy, Heat and its Effects, Sound waves and their properties, Reflection and refraction. Spherical mirrors and Lenses, Type and properties of magnet, Static and Current Electricity, conductors and Non-conductors, Ohms Law, Simple Electrical Circuits, Heating.

(d) **Chemistry** : Physical and Chemical changes. Elements, Mixtures and Compounds, Symbols, Formulae and simple Chemical Equations, Law of Chemical Combination, Properties of Air and Water, Preparation and Properties of Hydrogen, Oxygen, Nitrogen and Carbondioxide, Oxidation and Reduction, Acids, bases and salts, Carbon and its forms, Natural and Artificial Fertilizers, Elementary ideas about the Structure of Atom, Atomic, Equivalent and Molecular Weights, Valency.

**Note:-** The above syllabus is not a comprehensive list of topics pertaining to the subject. Questions are designed to test the candidate's general awareness of the environment around him and its application to society. Questions are also designed to test knowledge of current events and such matters of everyday observation and experience as may be expected of an educated person. At times questions may be asked other than the above topics also.