

UPSSSC Syllabus 2022 (Junior Engineer)

UPSSSC Exam Pattern 2022

Physics

- Units and Dimensions of Physical Quantity, Dimensional Formula and Dimensional Equations, Checking the Correctness of Physical Equations. Central forces, uniform circular motion (horizontal and vertical cases), angular acceleration and centripetal acceleration. Relationship between linear and angular velocity and acceleration. Gravitational force, acceleration due to gravity and its variation with respect to height and depth from Earth, Kepler's law, concept of polar satellite. Surface Tension, Equation of Continuity ($A_1V_1=A_2V_2$), Bernoulli's Theorem, Reynold's No. Conduction, Convection and Radiation. Coulombs Law, Electric Fields, Capacitors. Ohms Law, Basic idea of super conductivity, Meisner's effect. Non-conventional energy sources

Chemistry

- Basic concepts of atomic structure, quantum numbers, covalent bonds, hydrogen bonding, hybridisation. Hardness of water-disadvantages of hard water in different industries, disinfecting water by chloramine-T, ozone and chlorine, industrial waste and sewage, definition of BOD and COD. Free radicals, polymers and their classification, condensation polymers, nylon six, six melamine formaldehyde, terylene r decron, polyurethanes, TNT, RDX, dynamite, paint and veneer

Maths

- Application of Binomial Theorem, Cramer's Rule, Dot and Cross Products, Complex Numbers, Representation, Modules and Amplitudes, Demover Theorem. Relation between sides and angles of a triangle. Exponential, logarithmic, inverse circular and function, measure, velocity, acceleration, errors and approximation

Professional Communication

- Concept of Communication, Types of Communication, Techniques of Communication, Modern Tools of Communication: For Example-Fax, E-mail, Telephone, Telegram etc. Technical communication vs general communication. Kind of Letters-Official, Demi-Official, Unofficial, Quotation Tender, Application of Job "Resume", Parts of Speech, Preposition, Verb, Article, Everywhere