

Physics. Topics for the interview: physiotherapy

Recommended literature: Giancoli D.C.: Physics. Principles with applications / Kirk T.: Physics for the IB diploma. / Tsokos K.A.: Physics of the IB diploma.

1. Scalar and vector physical quantities, SI system of units.
2. Velocity and acceleration. Uniform motion and uniformly accelerated motion.
3. Force, mass and weight. Newton's laws of motion.
4. Work, kinetic energy, potential energy, power. Energy transformations. Conservation of energy.
5. Temperature, heat and internal energy. Thermal equilibrium, calorimetry. Specific heat and latent heat.
6. Pressure. Hydrostatic pressure, Pascal's principle, Archimedes' principle, buoyant force.
7. Electrostatics. Electric charge, electric field, field lines. Coulomb's law.
8. Electric current, voltage. Ohm's law, electric resistance. Resistors in series and parallel. Kirchhoff's first and second laws.
9. Magnets and magnetic fields. Magnetic induction. Current as a source of magnetic field.
10. Mechanical and electromagnetic waves; wavelength, period, frequency, speed of wave. Electromagnetic spectrum.