Online entrance examination questions

Master’s degree program in Nanophotonics and Metamaterials


3. Electric flux. Divergence theorem (Gauss's flux theorem) for the electric field vector. Application of Divergence theorem for point charge and infinite plane.


5. Electric dipole. Electric field and electrostatic potential of a point dipole. Electric dipole in external electric field (force, torque, potential energy).


7. Concept of electric capacity. Examples of capacitors with different geometrical configuration. Capacity of a parallel-plate capacitor.

8. Electromagnetic wave propagation along dielectric waveguides.
