

Syllabus – EAID CAA Placement Test
Physics
Topics:

1	Mechanics
	<ul style="list-style-type: none"> • Dimensional formula, Velocity -height problems, average speed • Projectile motion-maximum height, range • Newton's laws, Force, work done on the object • Centripetal acceleration, change in momentum of the object
2	Thermodynamics
	<ul style="list-style-type: none"> • Thermodynamics, Definitions; An adiabatic process, temperature of the system internal energy, average kinetic energy of its molecules, heat capacity, second law of thermodynamics, The efficiency of a heat engine
3	Electricity and magnetism
	<ul style="list-style-type: none"> • Electric circuit problems (series and parallel connections), Current and charge problems, power dissipation • Electric flux through the surface, magnetic field, solenoid, Gauss's Law definition (electrostatic and magneto static) of EMF
4	Optics
	<ul style="list-style-type: none"> • Optics • Diffraction • Lens concepts • Focal point definition • Refractive index definition
5	Modern Physics
	<ul style="list-style-type: none"> • Definitions, Heisenberg Uncertainty Principle, Pauli Exclusion Principle, Planck's Principle, photoelectric effect, Nuclear fusion, Nuclear fission, Alpha decay, Beta decay