

Syllabus for Bangladesh Physics Olympiad

Category-A

Classical Mechanics

Kinematics

- Basic understanding of position, displacement, average velocity, speed, acceleration
- Motion of a body under constant acceleration along a straight line (Graphically).
(No solution of quadratic equation should be required)
- Relative velocity in one dimension

Dynamics

- Basic understanding of force, mass and Newton's laws of motion for one particle
- Mathematical application for Newton's 2nd law ($F=ma$) in one dimension for a single particle
- Newton's law of gravitation
- Weight, Apparent weight

Work-Energy

- Basic understanding of work. Kinetic energy, (but not work-energy theorem).

Fluid:

- Density

Electromagnetism:

- Electric charge and their interaction with each other
- Coulomb's Law in scalar form
- Interaction of point charges with different bodies

All of the above in strictly one dimension.

Thermo:

- Qualitative idea of heat conduction, convection and radiation
- Temperature Scales

Mathematics:

- Algebraic expressions, equations
- Basic algebraic inequality
- Basic plane geometry (angles, lengths, perimeter, areas of common shapes, Pythagorean theorem etc)

Measurements/Experimental:

- Units and conversion
- Taking readings from equipment
- Graph plotting
- Mean, median, and mode