



GURU NANAK PUBLIC SCHOOL RAJOURI GARDEN

Syllabus:2026-27

Class:XI

Subject: PHYSICS

OBJECTIVES-

1. Strengthen the concepts developed at the secondary stage to provide firm foundation for further learning in the subject.
2. Expose the learners to different processes used in Physics-related industrial and technological applications.
3. Develop process-skills and experimental, observational, manipulative, decision making and investigatory skills in the learners.
4. Promote problem solving abilities and creative thinking in learners.
5. Develop conceptual competence in the learners and make them realize and appreciate the interface of Physics with other disciplines.

Unit -1A [15/4/26-16/5/26]

Lesson-TRIGONOMETRY

Lesson -DIFFERENTIATION

Lesson -INTEGRATION

Unit-1B [1/7/26 – 21/07/26]

Lesson 1- Units and measurements

Lesson 2- Motion in straight line

Lesson 3- Motion in plane

Activities- a. To make a paper scale of given least count, e.g., 0.2cm, 0.5 cm.

b. To determine mass of a given body using a meter scale by principle of moments.

c. To study the variation in range of a projectile with angle of projection.

Unit-2 [22/07/26- 12/08/26]

Lesson 4- Laws of motion

Lesson 5- Work, Energy and Power

Activities- a. To plot a graph for a given set of data, with proper choice of scales and error bars.

b. To measure the force of limiting friction for rolling of a roller on a horizontal plane.

c. To study the conservation of energy of a ball rolling down on an inclined plane (using a double inclined plane).

d. To study dissipation of energy of a simple pendulum by plotting a graph between square of amplitude and time.

Unit-3 [13/08/26-05/09/26]

Lesson 6- System of particles and rotational motion

Unit-4 [01/10/26-3/11/26]

Lesson 7- Gravitation

Lesson 8- Mechanical properties of solids.

Activities- a. To observe and explain the effect of heating on a bi-metallic strip.

Unit-5 [4/11/2026-5/12/26]

Lesson 9- Mechanical properties of fluids

Lesson 10- Thermal properties of matter

Activities- a. To observe change of state and plot a cooling curve for molten wax.

b. To study the effect of detergent on surface tension of water by observing capillary rise.

Unit 6 [7/12/26- 14/1/27]

Lesson 11- Thermodynamics

Lesson 12- Kinetic theory

Activities- a. To study the factors affecting the rate of loss of heat of a liquid.

Unit 7 [16/1/27-12/2/27]

Lesson 13- Oscillations

Lesson 14- Waves

Activities- a. i) To study the relation between frequency and length of a given wire under constant tension using a sonometer.

(ii) To study the relation between the length of a given wire and tension, for constant frequency, using a sonometer.

b. To find the speed of sound in air, at room temperature, using a resonance tube, by observing the two resonance positions.

