

CYNTHIA SENIOR SECONDARY SCHOOL, HALDWANI

SUMMER VACATION HOLIDAY HOMEWORK

Subject	Physics, Mathematics, English
Class	XI
Session	2026-27
Chapters Covered	Units & Measurements, Motion in Straight Line, Motion in a Plane

Physics Teachers:

- Mr. Ravindra Suntha (Class XI - A)
- Mr. I.D. Joshi (Class XI - C)

PHYSICS

INTRODUCTION

Physics is a science of observation, analysis, measurement, and interpretation of natural phenomena. This observatory assignment is designed to help students develop scientific thinking, analytical skills, and practical understanding of concepts studied in class. Students are expected to perform observation-based activities and connect Physics with real-life situations.

GENERAL INSTRUCTIONS

- Prepare the assignment in an A4 size project file or hard-base notebook.
- Maintain neatness, proper margins, headings, and page numbering.
- Use blue/black pen for writing and pencil for diagrams/graphs.
- All observations must be written in your own words.
- Draw graphs neatly using graph paper wherever required.
- Avoid direct copying from internet sources.
- The assignment must include labelled diagrams, tables, and graphical representation wherever applicable.
- Students must be able to explain their work during viva voce.

ASSIGNMENT FORMAT

- # Holiday Homework
- Cover Page
 - Acknowledgement
 - Index
 - Introduction
 - Objectives of the Assignment
 - Activity Sections
 - Graphical Analysis
 - Conclusion
 - References
-

ACTIVITY – 1 : MEASUREMENTS IN DAILY LIFE

Observe and record measurements used in daily life.

Select any 10 objects and measure quantities such as:

- Length
- Mass
- Time
- Temperature
- Speed

For each observation write:

1. Physical quantity measured
 2. Instrument used
 3. Unit used
 4. Least count of the instrument
 5. Possible errors during measurement
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ACTIVITY – 2 : MOTION OBSERVATION PROJECT

Observe the motion of any five moving objects around you such as:

- Moving vehicle
- Bicycle
- Ceiling fan
- Falling object
- Running person

For each observation write:

6. Type of motion
7. Estimated speed
8. Direction of motion
9. Uniform or non-uniform motion

10. Practical factors affecting motion

ACTIVITY – 3 : GRAPHICAL ANALYSIS

Prepare the following graphs neatly using graph paper:

- Distance-Time Graph
- Velocity-Time Graph
- Uniform Motion Graph
- Non-Uniform Motion Graph

Also explain:

11. Slope of graph
 12. Physical significance of slope
 13. Difference between uniform and non-uniform motion
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VECTOR OBSERVATION TASK

Observe any five real-life examples where direction is important.

Examples:

- Boat crossing river
- Airplane motion
- Throwing a ball
- Wind direction
- Car taking a turn

For each example:

14. Explain scalar and vector quantities involved
 15. Draw directional representation
 16. Explain why direction is important
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REAL LIFE APPLICATION SECTION

Write any five real-life applications related to:

- Units and Measurements
- Motion in Straight Line
- Motion in a Plane

Explain each application briefly with suitable examples.

MARKING SCHEME

Criteria	Marks
Presentation & Neatness	
Observation & Creativity	
Scientific Understanding	
Graphs & Diagrams	
Viva / Explanation	
Total	

MESSAGE TO STUDENTS

"Observation is the foundation of Physics. Learn to observe carefully, analyse scientifically, and connect classroom concepts with the real world."

MATHEMATICS

Chapter 1, 2, 3, 4 —do Extra Questions .

ENGLISH

PROJECT - 1

Title: "Exploring 'Portrait of a Lady' by Khushwant Singh"

Introduction:

Provide an overview of the short story "Portrait of a Lady" by Khushwant Singh. Briefly introduce the author and his significance in Indian literature.

Author's Background:

Discuss the life and literary contributions of Khushwant Singh, highlighting his writing style and themes.

Plot Summary:

Summarize the plot of "Portrait of a Lady," focusing on the central character, Mrs. Bimla, and her experiences.

Character Analysis:

Analyze key characters in the story, including Mrs. Bimla and the young narrator. Explore their traits, motivations, and how they relate to the themes of the story.

Themes and Motifs:

Explore the major themes and motifs present in the short story, such as social class, perception, and societal norms.

Personal Interpretation:

Share your personal interpretation of the story, discussing what you found most compelling or thought-provoking.

Conclusion:

Summarize the key points of your project and the significance of "Portrait of a Lady" in the context of Indian literature.

References:

Include a list of the sources and references you used for your project.

Project Guidelines / Instructions:

17. Project should be hand written.
18. It must contain 10-12 pages.
19. Use as many pictures and photographs as you require.
20. Use A-4 size paper sheets.
21. Cover page should contain – Title of project, School Name, Details of Student etc.
22. Index
23. Acknowledgement
24. Objective / Purpose of the project
25. Certificate