

Dr. Virendra Swarup Education Centre, Jajmau, Kanpur
Summer Holiday Homework (2026-27)
Class XII

PHYSICS:

Solve NCERT exercises of following chapters in separate notebook.

- Electric Field and dipole
- Electrical Potential and Capacitance
- Electrical resistance and Ohm's law.

Prepare an investigatory project file.

CHEMISTRY:

1. Do all the numerical from the chapters Solutions, Electrochemistry and Chemical Kinetics (NCERT) in a separate holiday homework notebook.

2. Prepare an investigatory project file.

BIOLOGY:

1. Prepare an Investigatory Project File on any topic from the NCERT Biology book.

- the project must be handwritten (not printed).
- Include suitable diagrams, charts, and pictures wherever required.
- Write neatly and arrange the content properly with headings and subheadings.

2. Solve the Previous Year Questions (PYQs) and NCERT Exemplar Questions of the following chapters:

- Sexual Reproduction in Flowering Plants
- Human Reproduction
- Reproductive Health
- Microbes in Human Welfare

3. Submit the homework in a neat and well-maintained file.

MATHEMATICS:

Do these activities in your math lab manual

Activity 1: Relations and functions

To verify that the relation R in the set L of all lines in a plane, defined by: $R = \{(l, m) : l \parallel m\}$ is symmetric but neither reflexive nor transitive.

Activity 2: Relations and functions

(A) To demonstrate a function which is not one-one but is onto.

(B) To demonstrate a function which is one-one but not onto.

Activity 3: Inverse Trigonometry Functions

To draw the graph of $\sin^{-1}x$. Using the graph of $\sin x$ and demonstrate the concept of mirror reflection (about the line $y = x$).

Activity 4: Inverse Trigonometry Functions

To sketch the graph of a^x and $\log_a x$, $a > 0$, $a \neq 1$ and to examine that they are mirror images of each other.

- Solve all the exercise of chapters Relations and functions, Inverse Trigonometry Functions, matrices and Determinant from NCERT book in your fair notebook.
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HINDI:

ग्रीष्म अवकाश गृह कार्य कक्षा - XII 1. "एक ऐसी घटना जिससे आपको जीवन का अमूल्य सबक मिला हो" तथा "युवा वर्ग में गहराती निराशा की भावना"दोनों विषय पर लगभग 200 शब्दों का रचनात्मक लेख लिखें।

परियोजना कार्य 2. पत्रकारीय लेखन के विभिन्न रूप और लेखन प्रक्रिया के महत्व को स्पष्ट करते हुए चित्रात्मक परियोजना तैयार करें।

अथवा

हरिवंश राय बच्चन, तुलसीदास, महादेवी वर्मा, हजारी प्रसाद द्विवेदी में से किसी एक का साहित्यिक व्यक्तित्व एवं कृतित्व पर प्रकाश डालते हुए आकर्षक चित्रात्मक परियोजना तैयार करें।

ENGLISH:

Do the following in your Language registers

1. Your school is conducting a summer camp for students. Students will be trained in various games and other activities. Write a notice for the school notice board about the same. Create necessary details. You are the activity in charge of your school.
2. Draft an invitation to invite a renowned artist to your school for a painting competition, create necessary details, you are the Art teacher Adarsh High School, Prayagraj
3. Write a letter to the editor of a newspaper, highlighting the prevalence of child labour in your city and suggest measures to curb this problem.

Project Work:

1. Analyze the role and position of women in the Indian Society

2. Research the impact of climate change and deforestation or Social injustices using examples from your textbook or other resources

Project Structure:

- Introduction: Briefly introduce the project topic and its significance.
- Research/Analysis: Conduct research or analysis of the chosen topic, drawing on relevant literature, interviews, or other sources.
- Findings/Discussion: Present your findings and discuss their implications.
- Conclusion: Summarize your findings and provide concluding remarks.
- Bibliography: List all sources used in your project.

Use pictures to illustrate

Make an attractive cover page for your project

Projects should have spiral binding having the first page with the school emblem, your name, class, roll number.

COMPUTER:

Part1: Basic Dictionary Operations Create a Periodic Table Dictionary Create a dictionary periodic table where the keys are the element symbols and the values are dictionaries containing: atomic number (the atomic number of the element), name (the full name of the element), atomic weight (the atomic weight of the element), group (the group in the periodic table). Perform following operations on Dictionary

- Add the elements to the dictionary:
- Print the periodic table dictionary after adding the elements.
- Access Element Information
- Write Python code to access and print the following information from the dictionary:
- The atomic number of Carbon.
- The atomic weight of Oxygen.
- The name of the element with the symbol
- Update Atomic Weight
- Print the updated periodic table dictionary to confirm the change.
- Delete an Element
- Print the dictionary after deletion.
- Add New Element
- Print the updated dictionary.

Part-2 : Design a flowchart for investigatory project (choose the topic yourself)
