LALA KAMLAPAT SINGHANIA EDUCATION CENTRE

Jhalrapatan, Jhalawar

HOLIDAY Homework

Session 2026-2027

Name: _____

Class: _____ *Section:* _____

FOR THE PARENTS

Summer Vacations are here. A few vital suggestions are listed below to make the vacations more exciting and fruitful than ever before:

- Keep at least half an hour a day for sharing experiences with your child.
- Encourage your child to speak in English. Fix one hour in a day when you communicate with your child only in English.
- Tell your child different stories regularly and encourage him to describe what he/she would do in a similar situation. Here are few suggested titles which you can read with your child.
  a. Hare and the Tortoise
  b. Emperor's New Clothes
  c. Thumbelina
- Let your child colour, draw, paint, play with water and sand etc.
- Restrict his or her television watching, confining it to interesting children's programs, cartoon films, Discovery channel etc.
- To improve the formation of letters, make your child write a page everyday.
- Develop self-help skills: Let your child dress and feed on his/her own.
- Make him understand the importance of cleaning his room and putting away toys and belongings after use.
- Take your child out for picnics and to other places of his/ her interest. Ask him/her to make a note of all the places he/ she visits and the things he/she sees so that he/she is able to discuss his/her experience in class after the vacation

Have a nice time!

Dr. Manoj Kumar Singh

Principal

CLASS – XII SCIENCE HOLIDAY HOMEWORK

Class XII – English Core

General Instructions

- Do all work in your English notebook
- Keep answers brief and to the point
- Use your own words
- Focus on clarity, originality, and understanding

Section A: Think and Reflect

Answer the following questions in 30–40 words each:

1. What change came in Franz's attitude on the day of the last lesson?
2. What does *The Last Lesson* teach us about language and identity?
3. How did Douglas overcome his fear of water?
4. What message does *Deep Water* give about courage and determination?
5. Why were the villagers present in the classroom?
6. How is fear similar to losing opportunities in life?

Section B: Creative Expression

Option A:
Write a **diary entry (100–120 words)** as Franz after the last lesson.

Option B:
Write a **diary entry (100–120 words)** as Douglas after finally overcoming his fear of water.

(Attempt any one)

Include:

- Feelings and emotions
- Realisation
- Lesson learnt

Section C: Speaking Skills

Prepare a **2-minute speech** on any one topic:

- "Fear is the biggest obstacle to success"
- "Value opportunities before they are lost"

Instructions:

- Write only 4–5 bullet points
- Do not write full speech
- Practice speaking at home

Section D: Beyond the Chapter

Answer in **80–100 words**:

1. If you were Franz, what changes would you bring in your life?
   OR
2. If you were Douglas, how would you inspire others to overcome fear?

Section E: Integrated Activity

Prepare a **comparison table** between *The Last Lesson* and *Deep Water* on an A4 sheet:

Basis	The Last Lesson	Deep Water
Theme		
Main Emotion		
Type of Conflict		
Lesson Learned		

Then write a **short paragraph (80 words)** answering:
Which lesson impacted you more and why?

Learning Outcomes

Students will be able to:

- Understand the importance of language and cultural identity
- Analyse fear and human psychology
- Develop reflective and critical thinking
- Express ideas effectively in written and spoken forms
- Build confidence in communication

CLASS XII (PHYSICS)

1. Complete Project from the topic given below (One project) in project file in at least 7-10 pages.

1. To study various factors on which the internal resistance/EMF of a cell depends.
2. To study the variations in current flowing in a circuit containing an LDR because of a variation in

   (a) the power of the incandescent lamp, used to 'illuminate' the LDR (keeping all the lamps at a fixed distance).

   (b) the distance of an incandescent lamp (of fixed power) used to 'illuminate' the LDR.
3. To find the refractive indices of (a) water (b) oil (transparent) using a plane mirror, an equiconvex lens (made from a glass of known refractive index) and an adjustable object needle.
4. To investigate the relation between the ratio of (i) output and input voltage and (ii) number of turns in the secondary coil and primary coil of a self-designed transformer.
5. To investigate the dependence of the angle of deviation on the angle of incidence using a hollow prism filled one by one, with different transparent fluids.
6. To estimate the charge induced on each one of the two identical Styrofoam (or pith) balls suspended in a vertical plane by making use of Coulomb's law.
7. To study the factor on which the self-inductance of a coil depends by observing the effect of this coil, when put in series with a resistor/(bulb) in a circuit fed up by an A.C. source of adjustable frequency.
8. To study the earth's magnetic field using a compass needle -bar magnet by plotting magnetic field lines and tangent galvanometer.

Objective:

This assignment is designed to strengthen students' **conceptual clarity, numerical ability, and examination preparedness** through practice of **CBSE Board Examination questions (2024–2026 pattern)**.

-Do at least 40 Previous years questions of your choice (Chapter 1, 2, 3 only) from CBSE board examination from papers of 2026,2025,2024, as

- Max 20 MCQ
- 10 Questions 2 marks each

  10 questions 5 marks each

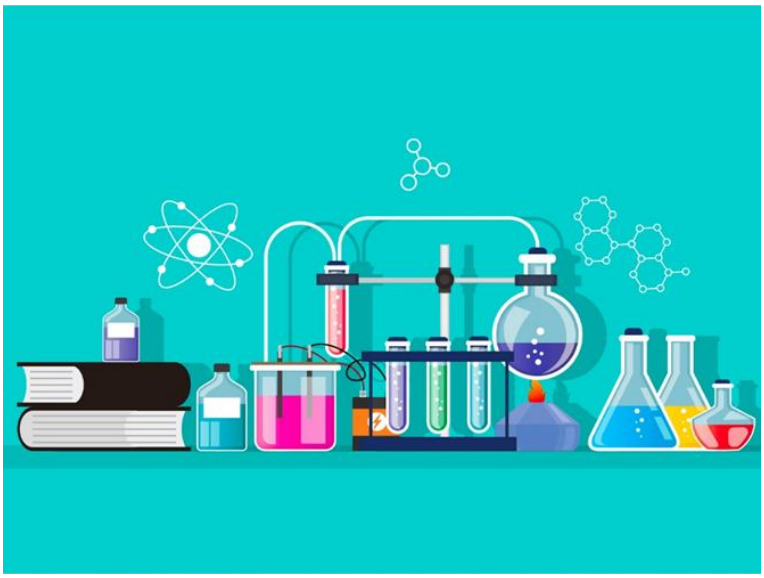
CLASS –XII (CHEMISTRY)

Students are required to solve **numerical-based previous year questions** from the chapter **"Solution"** in the form of an assignment.

The questions should be selected from **CBSE Board Examination papers of recent years** and must focus on the application of concepts such as the **mole concept, stoichiometry, and numerical problem-solving**.

All solutions must be presented in a **systematic and step-wise manner**,

clearly showing the formulas used, calculations performed, and appropriate units. Students are expected to maintain **accuracy, proper presentation, and the use of significant figures** while solving the questions.



MATHEMATICS PROJECT

Objective

To understand relations and functions, their types, and real-life applications.

Introduction

Relations and functions are fundamental concepts in mathematics. A relation connects elements of two sets, while a function assigns exactly one output to each input.

Activity 1: Understanding Relations

A relation from set A to B is a

subset of A × B. Example: A =

{1,2,3}, B = {4,5}, R =

{(1,4),(2,5),(3,4)}

Task: Check whether R = {(1,1),(2,2),(3,3)} is reflexive, symmetric, and transitive.

Activity 2: Understanding Functions

A function assigns each input

exactly one output. Task:

Check whether $f(x) = x^2$ is one-

one or onto.

Activity 3: Domain and Range

Example: f(x) = 1/(x-2)

Domain: All real numbers

except 2 Range: All real

numbers except 0

Activity 4: Real-Life Application

Temperature conversion formula: F = (9/5)C + 32

Task: Convert 0°C, 25°C, 100°C into Fahrenheit and plot graph.

Activity 5: Inverse Function

Given f(x) = 3x +

2 Inverse:

f■¹(x) = (x -

2)/3

Conclusion

This project highlights the importance of relations and functions in real-life applications.

Bibliography

NCERT Mathematics Class XII CBSE Guidelines Teacher Notes

CLASS-XII (BIOLOGY)

Objective:

The project aims to develop **scientific temperament, research skills, analytical thinking, and awareness of contemporary biological issues** in accordance with CBSE guidelines and competency-based education.

PROJECT TOPICS

Students are required to prepare a **comprehensive project** covering the following topics:

1. Allergy

- Definition and types of allergies
- Causes and common allergens
- Immune response involved in allergic reactions
- Preventive measures and treatment

2. Drugs

- Definition and classification (e.g., depressants, stimulants, hallucinogens)
- Effects of drug abuse on the human body
- Social and psychological impact
- Preventive measures and awareness

3. Cancer

- Definition and types of cancer
- Causes (carcinogens, genetic factors, lifestyle)
- Symptoms and diagnosis
- Treatment methods (chemotherapy, radiation therapy, immunotherapy)

4. Infertility

- Definition and causes in males and females
- Role of lifestyle and environmental factors
- Assisted Reproductive Technologies (ART) such as IVF, ICSI
- Social and emotional aspects

5. Diabetes

- Types: Type 1 and Type 2 Diabetes
- Causes and symptoms
- Role of insulin
- Management through diet, exercise, and medication

6. Gene Therapy

- Definition and concept
- Types (somatic and germline gene therapy)
- Applications in treating genetic disorders
- Ethical considerations

7. Pollination

- Definition and types (self and cross-pollination)
- Agents of pollination (biotic and abiotic)
- Importance in plant reproduction
- Role in agriculture and ecosystem stability

8. Biodiversity

- Definition and levels (genetic, species, ecosystem diversity)
- Importance of biodiversity
- Threats to biodiversity
- Conservation methods (in-situ and ex-situ)