HOLY ANGEL PUBLIC SCHOOL

SUMMER HOLIDAY HOMEWORK

SESSION 2026-27

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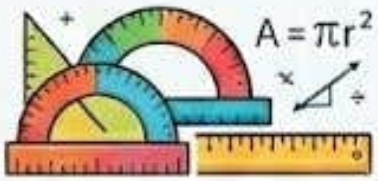

MATHEMATICS

2

SCIENCE

3

SOCIAL STUDIES

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HINDI

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SANSKRIT

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ENGLISH

HOLY ANGEL PUBLIC SCHOOL

SUMMER VACATION

CLASS 8 MATHEMATICS

Summer Holiday Homework Assignment

> *"Mathematics is not about numbers, equations, computations, or algorithms: it is about understanding." — W. P. Thurston*

📌 GENERAL INSTRUCTIONS:

- You have to do this holiday homework in a separate holiday homework notebook.
- Try to do your work neatly and clearly.

1. POWER PLAY (EXPONENTS & POWERS)

Q1. Evaluate the numerical value of the expression completely: $(1/3)^{-2} + (1/4)^{-2} + (1/5)^{-2}$

Q2. Solve for the unknown value of m that satisfies the equation: $(-3)^{m+1} \times (-3)^5 = (-3)^7$

Q3. Simplify the expression and write your final result using a positive exponent: $(2/3)^{-7} \times (3/2)^{-5}$

Q4. Find the value of x that satisfies the following division rule: $7^{2x - 1} \div 49 = 343$

Hint: Express all terms with a base of 7 first.

Q5. Convert and write the following exceptionally small measurements into standard scientific notation ($a \times 10^n$):

• 0.0000000000085 • 0.00000000342

Q6. The size of a red blood cell is $0.000007\ m$ and a plant cell is $0.0000127\ m$. Convert both into standard scientific form and find the ratio of the plant cell size to the red blood cell size.

2. QUADRILATERAL PLAY (UNDERSTANDING SHAPES)

Q1. The four interior angles of a convex quadrilateral are in the ratio $2 : 4 : 5 : 7$. Determine the exact degree measure of all four angles.

Q2. In a parallelogram $PQRS$, the measure of angle P is exactly twice the size of its consecutive adjacent angle Q. Calculate the degree measures of all four angles.

Q3. In a kite $ABCD$ where $AB = AD$ and $CB = CD$, the diagonals intersect at point O. If $\angle OAB = 35°$, determine the exact measure of $\angle OBA$.

Q4. In a trapezium $ABCD$, side $AB \parallel CD$. If $\angle A = 55°$ and $\angle B = 70°$, calculate the remaining interior angles, $\angle C$ and $\angle D$.

Q5. The diagonals of a rhombus measure $16\ cm$ and $12\ cm$. Calculate the exact length of one side of the rhombus.

Hint: Diagonals of a rhombus bisect each other perpendicularly at 90°. Apply Pythagoras' Theorem.

Q6. State whether the following assertions are true or false, providing solid mathematical reasons:
• a) All rectangles are squares. • b) All rhombuses are parallelograms.

3. NUMBER PLAY (PLAYING WITH NUMBERS)

Q1. The sum of the digits of a two-digit number is 9. If 27 is subtracted from the original number, the digits swap and reverse their places. Find the original number.

Q2. If a three-digit number written as $24x$ is a perfect multiple of 9, find all the possible single-digit whole number values that x can assume.

Q3. Without executing long division, check if the 6-digit number $284,592$ is perfectly divisible by 11. Show your steps explicitly by computing the sum of digits in odd positions and even positions.

Q4. Find the single-digit values of the letters A and B in the following addition puzzle:

$$3A + 25 = B2$$

Q5. Find the unique values of the letters A and B that satisfy the multiplication layout:

$$AB \times 6 = BBB$$

Q6. For any three-digit number represented as abc, demonstrate algebraically why the sum of its cyclic permutations ($abc + bca + cab$) is always completely divisible by 37 and 111.

4. WE DISTRIBUTE, YET THINGS MULTIPLY (ALGEBRAIC EXPRESSIONS)

Q1. Multiply the following pair of binomial expressions together and simplify by grouping like terms: $(2x + 3y)(3x - 5y)$

Q2. Utilize a standard algebraic identity to expand and evaluate: $(4p - 3q)^2$

Q3. Compute the product of 103×97 using standard algebraic identities without performing straight, long-form multiplication.

Hint: Rewrite the numerical values as (100 + 3)(100 - 3).

Q4. Expand and simplify the following multi-bracket algebraic expression completely: $(x^2 - 5)(x + 5) + 25$

Q5. If $x + 1/x = 6$, evaluate the precise numerical value of $x^2 + 1/x^2$ by squaring both sides of the equation.

Q6. The length of a rectangular community park is given by $(3x + 2)$ meters and its width is $(2x - 1)$ meters. Write out the fully expanded algebraic expression that represents its total area.

5. SQUARE AND CUBE PLAY

Q1. A total of 1225 student cadets stand in a parade square for a physical drill. They are arranged such that the number of rows is exactly identical to the number of columns. Determine the exact number of rows.

Q2. Find the smallest positive whole number by which 180 must be **multiplied** so that the resulting product becomes a perfect square.

Q3. Find the square root of the integer 7921 utilizing the mathematical Long Division Method. Show all group bars and remaining steps explicitly.

Q4. Evaluate the precise square root of the rational decimal number: $\sqrt{42.25}$

Q5. Find the smallest whole number by which 256 must be **divided** so that the resulting quotient forms a perfect cube number.

Q6. The total internal storage capacity volume of a cubical shipping box is $13{,}824\ cm^3$. Find the exact length of a single edge of this box using the prime factorization method.

PART B: CREATIVE MATHEMATICS CHART PROJECT

Instructions: Select exactly **ONE** option from the choices below to construct an informative, visually appealing chart presentation on an A3 or standard-sized colored chart paper.

Option	Project Title	Core Requirements & Elements to Include
Option 1	The Quadrilateral Family Tree	Design a visual flowchart mapping the lineage of quadrilaterals: Trapeziums, Kites, Parallelograms, Rhombuses, Rectangles, and Squares. List properties of sides, angles, and diagonals.
Option 2	The Identity Matrix Poster	Create a stylized guide illustrating the three fundamental identities: $(a+b)^2$, $(a-b)^2$, and $(a+b)(a-b)$. Provide a clean, step-by-step color-coded numerical example for each.
Option 3	Visualizing Squares & Cubes	Draw geometry grids showing the representation of square numbers (2D grid areas) and cube numbers (rendered 3D block structures) from numbers 1 to 15, paired with a root reference table.
Option 4	The Magic of 11: Divisibility Art	Design a poster detailing the "Odd vs. Even Places" rule for checking 11's divisibility. Use a large 6-digit number (e.g., $284{,}592$) and color-code the alternate places to make it visual.
Option 5	Math in Space (Standard Form)	Create an astronomy-themed display card. Map real interplanetary distances from our Solar System in regular notation, then convert them into scientific standard notation ($a \times 10^n$).
Option 6	The Algebraic Jungle (Distribution)	Illustrate a sequential flow map explaining the title "We Distribute, Yet Things Multiply." Show visually how a binomial multiplies with another binomial $(a+b)(c+d)$ step-by-step using pathing curves.
Option 7	Historical Roots & Math Pioneers	Produce a biographical study poster highlighting a legendary mathematician (e.g., Srinivasa Ramanujan or Pythagoras). Include discovery timelines and quick trivia facts.

HOLY ANGEL PUBLIC SCHOOL

SUMMER HOLIDAY HOME WORK

CLASS 8

Learning is the beginning of wealth.

Learning is the beginning of health.

Learning is the beginning of spirituality.

Searching and learning is where the miracle process all begins.

INSTRUCTIONS:

a) Holidays homework is a part of subject enrichment and will be assessed on the basis of creativity and efforts of the students.

b) The marks of holiday homework will be included in your Term-1 exam. Kindly deposit the holiday homework on 3rd July 2026 later it will not be accepted by me.

c) Make a separate notebook for summer holiday homework which could also be used for winter holiday homework.

1. Read about Indian scientists like Suniti Solomon, Asima Chatterjee, Dr. Yellapragada Subbarao, Dr. Mary Poonen Lukose for their contributions in the field of health and diseases and write a summary about it.

2. The deadly disease smallpox was eradicated by vaccination. Write a brief report how this was done and why it worked also whether everyone should be required to get vaccinated to protect others.

3. Imagine a scenario where the gravity disappears. Develop a story. Create a cartoon strip to present your story.

4. List three major cyclones which have occured in India in the last 20 years. List two major destruction caused by each of the cyclones. What measures were taken by the local government and communities to reduce the loss of life and destruction of property? Mention two suggestions you would like to propose to the local government.

5. Below are the photos of apparatus used in science laboratory. Write their names and remember the uses it would be discussed in classroom.

Science Teacher: Chandrima Joshi (8390096334)

The commonly used apparatus in science laboratory are glasswares, measuring instruments and other apparatus.

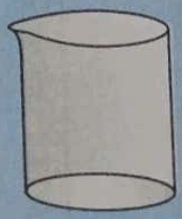
Glasswares

(*i*) **Test tube**. It is a cylindrical glass tube whose one end is open and other end is rounded. There are different types of test tubes made up of different types of glasses. Test tubes made from expansion-resistant glasses such as pyrex can be placed directly over a Bunsen burner flame. Such test tubes are called boiling test tubes or hard glass tubes. They are used for carrying out reactions.

(*ii*) **Beaker**. It is an open glass container. It is cylindrical in shape with a flat bottom and a lip for pouring. It is used for stirring, mixing and heating liquids.

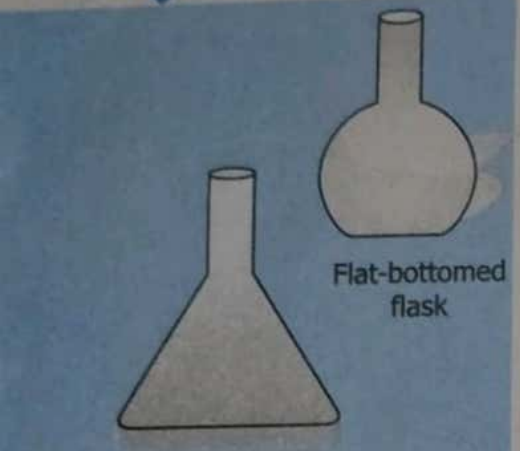
(*iii*) **Round-bottomed flask.** It is a glass container with spherical bottom and a narrow cylindrical neck. It is generally used for heating liquids. It allows more uniform heating and/or boiling liquids.

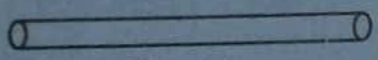
Test tube



Beaker

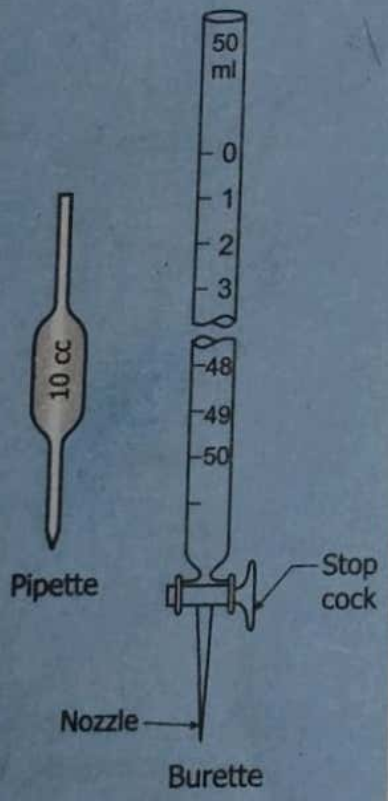
Round-bottomed flask




Glass tube


Glass rod


Funnel



(*iv*) **Flat-bottomed flask.** It is similar to round-bottomed flask but has a flat bottom that allows it to stand on a levelled surface.

It is used for storing and mixing solution. It is also used for carrying out reactions at room temperature. It should not be used for heating purpose.

(*v*) **Conical flask.** It has a flat base, conical body and a cylindrical neck. It is usually marked on the side (graduated) to indicate the approximate volume of contents. It is used to heat liquids and for carrying out reactions in volumetric analysis.

(*vi*) **Glass tube.** It is a hollow cylindrical tube of glass and is open at both the ends. It can be bent by heating to make it a delivery tube.

(*vii*) **Glass rod.** It is a solid, cylindrical glass tube. It is used for stirring liquids in flasks and beakers.

(*viii*) **Funnel.** It has a conical-shaped mouth and a long tapering neck. It is used to pour liquids in small containers like bottles. It is also used for filtration.

(*ix*) **Thistle funnel.** It is a specially designed funnel with a long hollow tube. It is used for transferring liquid reactant in to a sealed reaction vessel.

(*x*) **Watch glass.** It is circular, slightly concave in shape. It is used to evaporate a liquid, to hold solids while being weighed or as a cover for a beaker.

(*xi*) **Gas jar.** It is a glass container with a broad base and broad opening. It is used for collecting gas from experiments.

Measuring Instruments

(*i*) **Pipette.** It is a long narrow tube and is marked on sides (graduated) with a nozzle at one end and a bulb in the middle. It is used to measure a volume of liquid and transfer it to other apparatus.

(*ii*) **Burette.** It is a long cylindrical tube. It has fine graduations on sides and stop cock at its bottom end. It is used for measuring and dispensing known amounts of liquids. It is widely used in volumetric analysis.

(*iii*) **Measuring cylinder.** It is a cylindrical glass vessel. It has a flat bottom and a lip for pouring at the top. It is used for measuring a fixed volume of liquids.

(*iv*) **Thermometer.** It is a device used to measure temperature. It is a narrow cylindrical tube. It is close at the top and has a bulb containing mercury at the bottom. It is graduated on sides.

Measuring cylinder

Thermometer

Magnifying Instruments

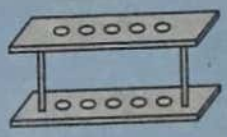
(*i*) **Hand lens (Magnifying glass).** It is a simple double convex lens mounted in a metallic or plastic frame with a handle. It can magnify objects 4 to 6 times of their original size. It is used to observe small-sized, fine objects such as small insects, florets and flower parts.

Hand lens

(*ii*) **Microscope.** It is a device that uses light source to illuminate the object and magnify the material by making use of two lenses at the same time.

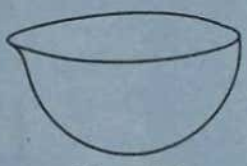
Other Apparatus

(*i*) **Test tube stand or rack.** It is made up of plastic or wood. It has bars and holes to keep the tubes in inverted or uplight position respectively.



Test tube stand

Test tube holder

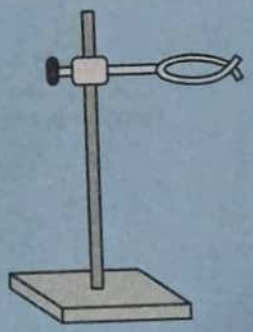


China dish

(*ii*) **Test tube holder.** It is a metallic rod with plastic or wooden handle at one end and a clamp at the other end. It is used to hold a test tube while heating a substance or when strong chemicals like acids or alkalis are poured in to other apparatus.

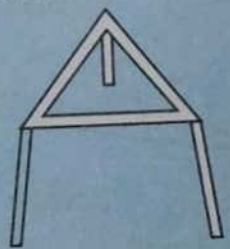
(*iii*) **China dish.** It is a small vessel made of porcelain. It is used to evaporate liquids by heating.

(*iv*) **Iron stand.** It has a long iron rod fixed on a flat base. Clamps can be attached on iron rod. It is used for holding apparatus such as round-bottomed flask or test tubes in a specific position.

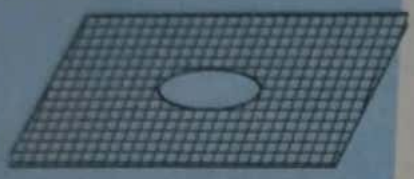


Iron stand with clamp

(*v*) **Tripod stand.** It has three legs and a triangular base in the middle. It is made up of iron. It is used for supporting apparatus, while heating on Bunsen burner or spirit lamp.

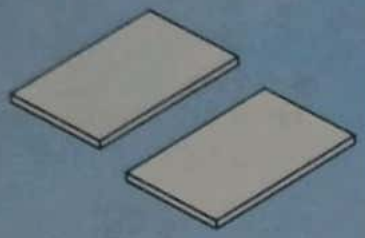


Tripod stand



Wire gauge

(*vi*) **Asbestos wire gauge.** It is an iron wire mesh with thin asbestos in the middle. It is used during heating purposes. It is kept above the flame of the burner to avoid direct contact with the glass apparatus. It provides uniform heating and thus, prevents the glass from breaking.



Glass slides

(*vii*) **Slide.** It is a small rectangular piece of glass. It is used to keep small objects and observe them under the microscope.

Pestle

Mortar

(*viii*) **Pestle and mortar.** A pestle is a heavy bat-shaped stick whose end is used for pounding and grinding and mortar is a bowl. They are made of porcelains, stoneware, marble or wood. They are used to crush, grind and mix solid substances.

Spirit clamp

(*ix*) **Spirit clamp.** It is a device used for heating purposes. It burns alcohol or other liquid fuel to produce heat.

Bunsen burner

(*x*) **Bunsen burner.** It is a device used for heating purposes. It consists of a mixing tube, in which gas and air are mixed. The gas comes from the nozzle and air comes from the air holes.

Spatula

(*xi*) **Spatula.** It is like a spoon. It is used to take small quantities of solid chemicals.

Dropper

(*xii*) **Dropper.** It is a long glass or plastic tube with a vacuum bulb at one end for draining liquid in and releasing a drop, at a time.

(*xiii*) **Analytical balance.** It is a device that is used to measure mass to a very high degree of precision and accuracy. It consists of weighing pan(s), which are kept inside transparent enclosure with doors.

Analytical balance

(*xiv*) **Reagent bottle.** It is a container that is used to hold liquid chemicals. It is usually made up of glass.

Reagent bottle

(*xv*) **Beehive shelf.** It is used to support a receiving jar or tube while a gas is being collected over water with a pneumatic tough.

(*xvi*) **Cork borer.** It is a metal tool used for cutting hole in a cork or rubber stopper to insert glass tubing.

Beehive shelf

Class VIII – Social Science Holiday Homework

Project Theme: "Election and Our Party – Uttarakhand"

Objective

To understand the importance of democracy, elections, and responsible citizenship by designing a political party for **Uttarakhand**.

Instructions

- Use an A4 project file.
- Write neatly in **English**.
- Draw and colour wherever required.
- Add pictures, maps, and charts to make the project attractive.
- Total Length: **12–15 pages**

– Cover Page

Title:

Election and Our Party – Uttarakhand

Student's Name

Class

Roll No.

School Name

Academic Session

(Add a drawing of the Uttarakhand map, Indian Flag, and EVM.)

– Acknowledgement

Write 6–8 lines thanking your teacher, parents, and school for helping you complete this project.

– Introduction

Write about:

- What is Democracy?
- What is an Election?
- Why are elections important?
- Why should every citizen vote?

– Elections in Uttarakhand

Write about:

- Formation of Uttarakhand (9 November 2000)
- Number of districts (13)
- State Legislative Assembly
- Chief Minister (Current)
- Role of the Election Commission

(Add the map of Uttarakhand.)

– My Political Party

Create your own political party.

Write:

- Party Name
- Party Symbol (Draw)
- Party Flag (Design and Colour)
- Party Motto
- Party Leader
- Party Vision

– Our Election Manifesto

Write **10 promises** for Uttarakhand.

Example:

- Better schools
- Better hospitals
- Clean rivers
- Plastic-free villages
- More employment opportunities
- Better roads in hilly areas
- Tourism development
- Forest protection
- Women's safety
- Digital education

– Election Campaign

Design:

- One election poster
- One campaign banner
- One pamphlet

Write a **5-line campaign speech**.

Example:

"Dear friends,
Our party believes in education, honesty, and development.
Together we can build a cleaner and stronger Uttarakhand.
Your vote is your voice.
Vote for a brighter future."

– Voting Process

Draw a colourful flow chart.

Voter Registration
⬇
Nomination
⬇
Campaign
⬇
Voting
⬇
Counting
⬇
Result

(Add drawings of an EVM and polling booth.)

– Importance of Voting

Write **150 words** on:

"Every Vote Counts"

– Survey Activity

Ask **five adults** these questions.

- Do you vote?
- Why is voting important?
- What qualities should a good leader have?

– Conclusion

Write:

"How can students become responsible citizens?"

Mention:

- Respect rules
- Protect nature
- Help society
- Be honest
- Respect democracy

होली एंजिल पब्लिक स्कूल,अल्मोड़ा।

ग्रीष्मकालीन गृह-कार्य

कक्षा -आठ विषय - हिंदी

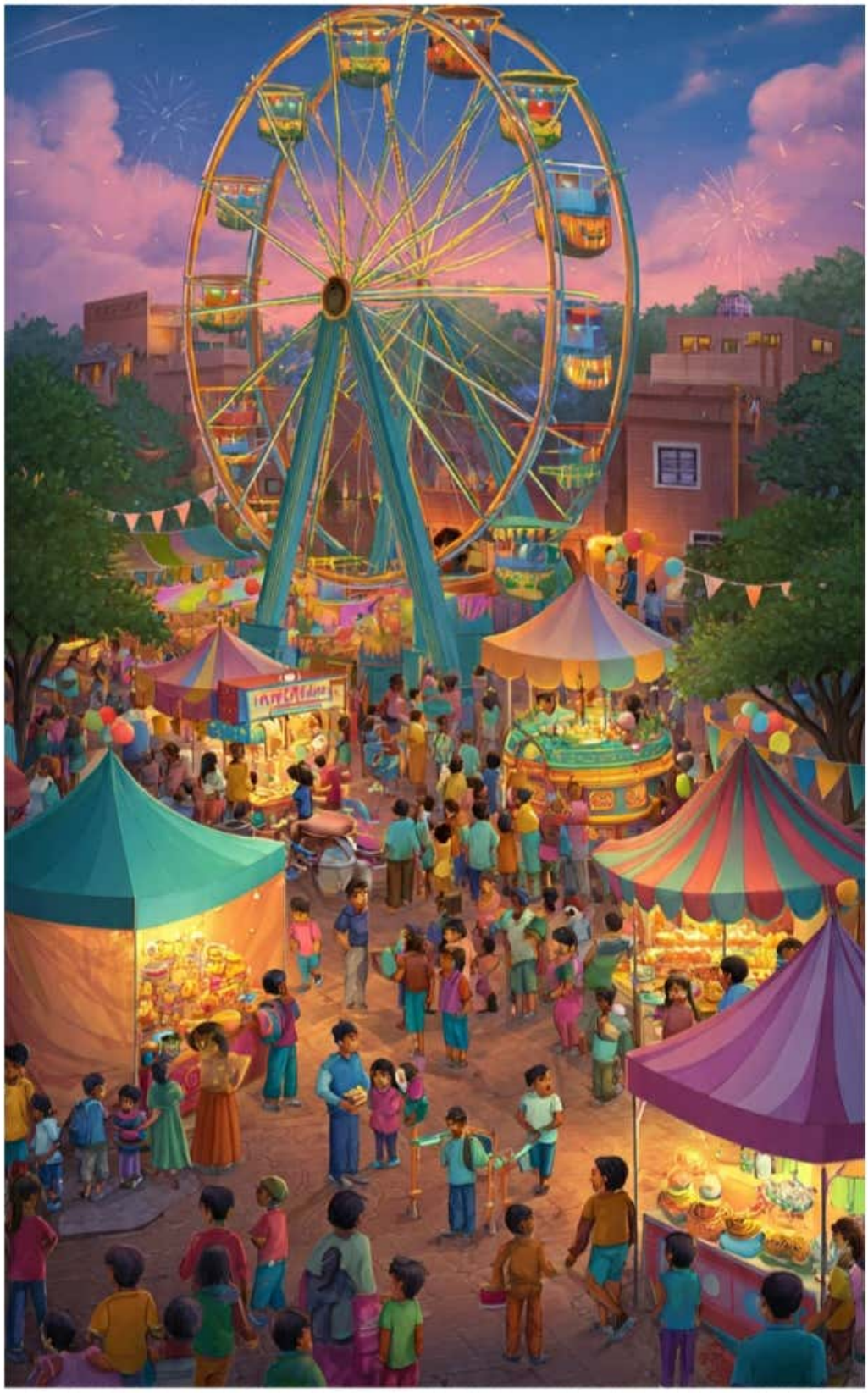
निर्देश :- 1)सभी प्रश्नों के उत्तर याद करके सुंदर लेख में लिखें। 2) दिए गए प्रश्नों के उत्तर के लिए एक अलग नोटबुक (Separate notebook)का प्रयोग करें।
3) इस गृह- कार्य के लिए दस अंक (10 marks) निर्धारित हैं व जमा करने की अंतिम तिथि 06/07/26 है।

प्रश्न 1- पाठ 4 व 5 के शब्दार्थ याद करके लिखिए।

प्रश्न 2- पाठ - 5 'कबीर के दोहे' से किन्ही दो दोहों को याद करके उनका अर्थ संदर्भ सहित लिखिए।

प्रश्न 3- क्षेत्र के डाकपाल को डाक की कुव्यवस्था के बारे में डाकिए की शिकायत करते हुए पत्र लिखिए।

<u>प्रश्न 4</u>- दिए गए चित्र का वर्णन दस (10) पंक्तियों में करें।



<u>प्रश्न 5</u>- संज्ञा के प्रकार को एक चार्ट के माध्यम से दर्शाओ व उदाहरण भी लिखो।

<u>प्रश्न 6</u>- अपने ग्रीष्मकालीन अवकाश के अनुभव को एक पृष्ठ में पूर्ण कीजिए।

होली एन्जिल पब्लिक स्कूल -अल्मोड़ा

ग्रीष्म कालीन अवकाश हेतु गृहकार्य 2026-27

कक्षा -आठ विषय- संस्कृत

1- **एक से पचास** तक संस्कृत में गिनती लिखें।

2- अपनी पाठ्य-पुस्तक से कोई भी **पांच श्लोक** लिखकर याद करें।

3- "**खाद्**"(खाना) धातु के पांचों लकारों में रूप लिखें।

4- **सात पशु** तथा **सात पक्षियों** के नाम संस्कृत में लिखें।

5- दैनिक जीवन में उपयोग होने वाली **बीस सामग्रियों** के नाम संस्कृत में लिखें।

निर्देश - इस कार्य को अपनी संस्कृत की कॉपी में करे।

Summer Holiday Home work

Class- 8

Subject – English

1.Story Writing

Develop stories from given outlines. Remember to give the moral of the story in the end.

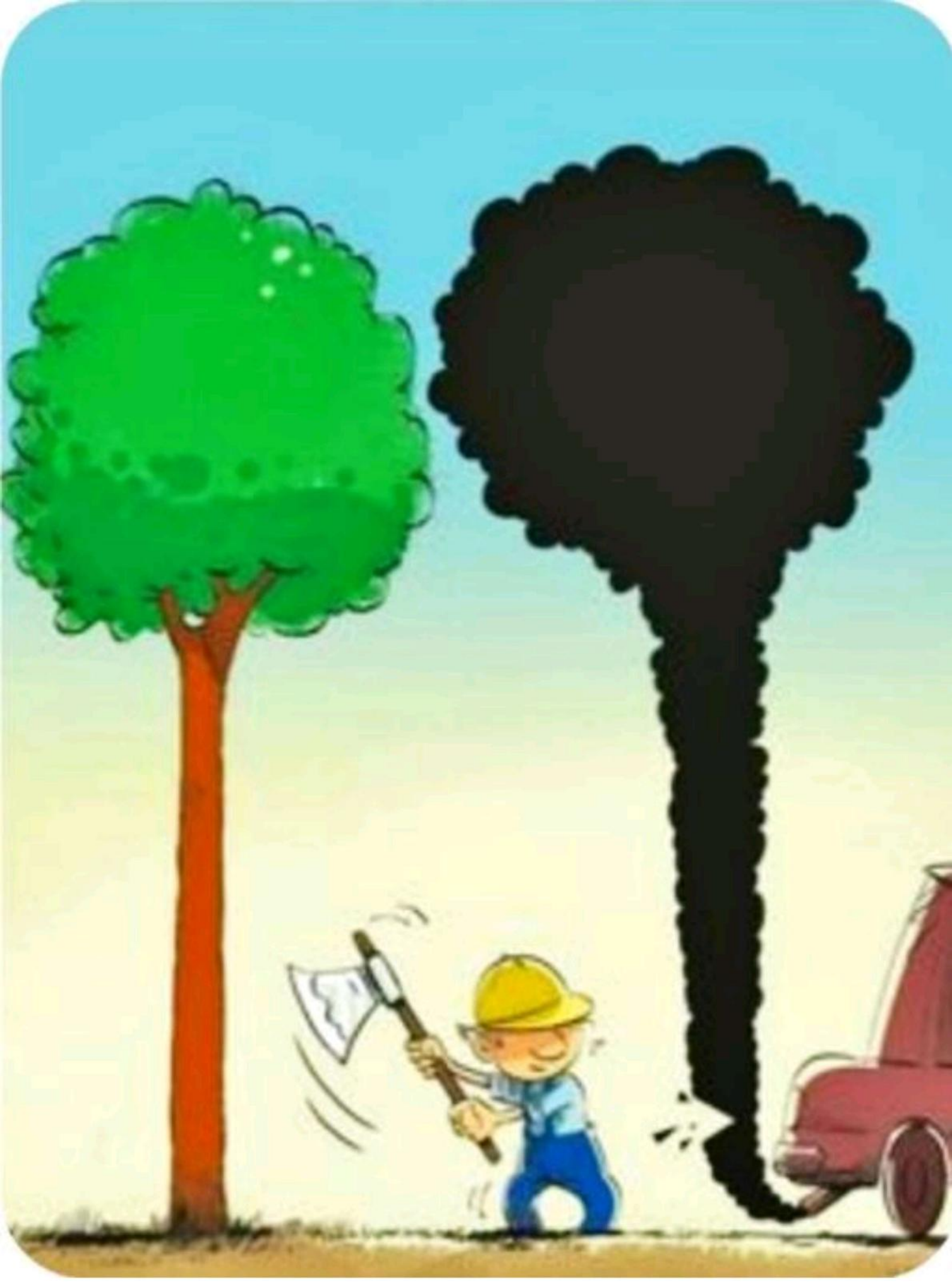
A. An old lady becomes blind ..... Calls in a doctor ..... Agrees to pay large fees if cured ..... doctor comes daily..... Starts stealing one piece of furniture daily ..... Delays the cure ..... at last cures her ..... Demands his fees..... lady refuses to pay, saying cure is not complete..... doctor objects lady says sight not restored as she cannot see all her furniture ..... Moral.
B. God's promise to a disciple to visit her..... disciple cleans her house and waits for God..... poor old lady knocks her door ..... disciple doesn't help her ..... tells her not to waste her time ..... next, beggar comes at her door step she doesn't entertain him either ..... Finally a child knocks her door ..... she sends him away too ..... dreams of God that night ..... God tells him that he had come thrice at her door step, but she didn't bother ..... lady disappointed ..... moral.
C. A rich man ..... had many servants..... purse with lot of money is stolen from rich man's drawer..... rich man files a complaint in the police station ..... all the servants called ..... stick of same length given to each ..... servants told that stick of the thief will grow by one inch overnight ..... the thief cuts his stick by one inch ..... he is easily caught the next day.
D. Son falls into bad company..... Disobeys his parents ..... loses interest in studies ..... father decides to bring the son back to the right path ..... gives him a few apples ..... places a rotten apple among the good ones ..... after a few days the good apples also become rotten ..... son understands that one rotten apple spoils all the apples ..... tries to mend his ways ..... gets transformed..... moral.
E. Lazy king ..... liked to eat and sleep all the time ..... became inactive ..... doctor called to cure him ..... minister of king meets a holy man ..... sadhu offers to cure the king ..... calls the king to his hut on foot ..... king does as he is told ..... walks all the way to the hut ..... starts sweating ..... Sadhu gives iron ball to the king and asks him to do exercise with it every day..... king does as he is told ..... loses weight ..... gets cured ..... moral.

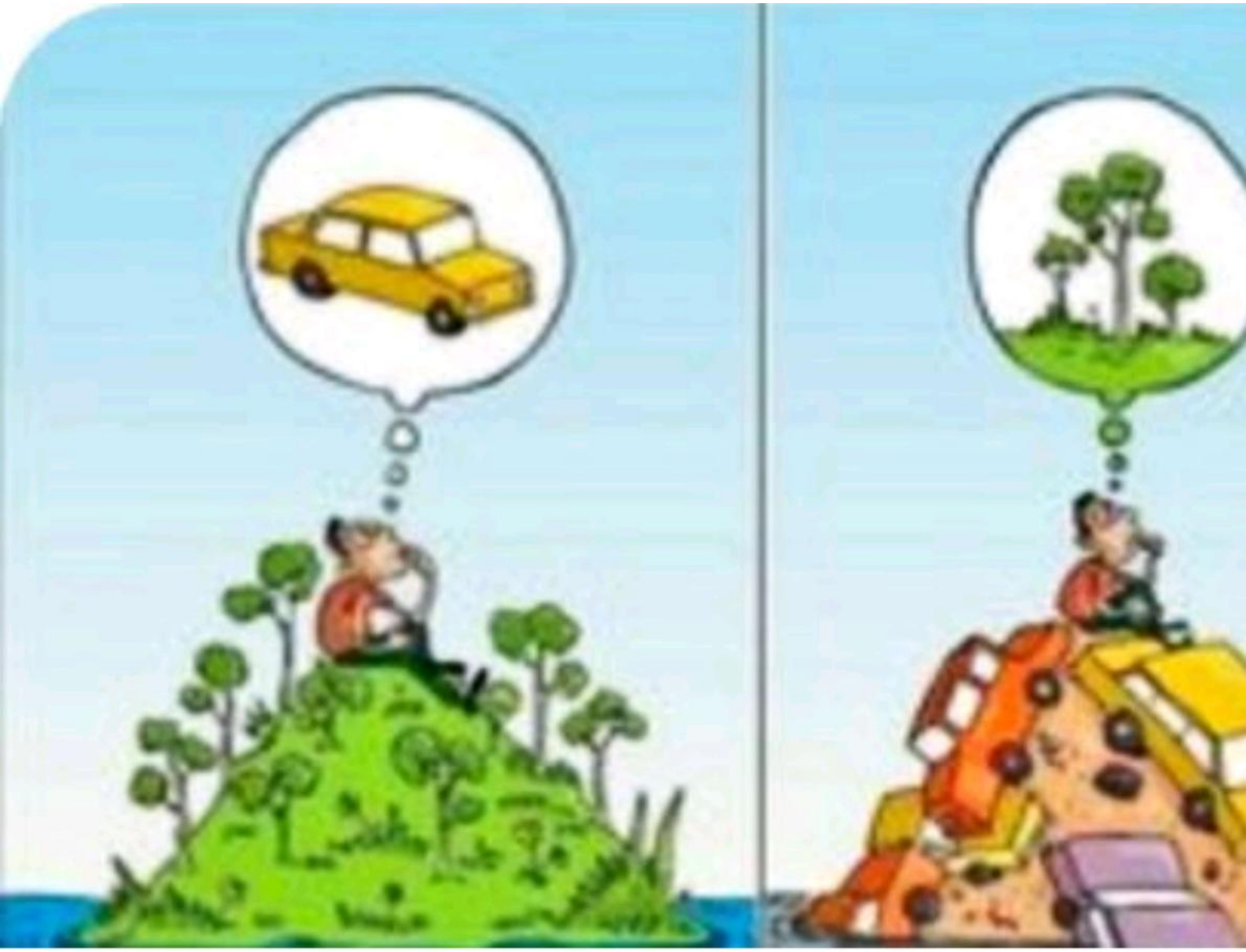
2. Letter writing

A. Your father has sent you a watch as a present on your birthday, but it is not keeping correct time. Write a letter informing him of this fact and requesting him to get it replaced. You are Sudha/Sudhir.
B. Write a letter to a friend who has not returned your book. Request him to return it immediately as you have to finish your home work.
C. Write a letter to the District Magistrate drawing his attention to the nuisance of loudspeakers in your locality.
D. Write a letter to your friend inviting him to come to Delhi during the vacation. Mention a few attractions that you want both of you to visit.
E. Write a letter to the Editor of Bharat Times Lucknow about frequent break-down of electricity. You can use the following points—
   *Irregular and erratic supply
   *Affects water-supply
   *Dark streets invite accidents
   *Any other point

3. Picture writing

Look at the given picture and write composition on the basis of picture:



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6
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