असतो मा सद्गमय, तमसो मा ज्योतिर्गमय।।

HALLMARK PUBLIC SCHOOL
www.hallmarkpublicschool.com

Summer Vacation Assignment 2025

CLASS-X

Summer VACATION

Summer's warmth descends upon the land,
School's out, and freedom's in hand.
Long days stretch, and sunshine bright,
A time for fun, for play, for delight.

So, let's bask in summer's golden glow,
And make the most of this break's sweet flow.
For summer vacation's a treasured time,
To relax, recharge, and shine!

JUNE 01, 2025 TO JULY 06, 2025

The School Reopens on
JULY 07, 2025.

Dearest Hallmarkite

Greetings from Hallmark!

As we head into the sunny days ahead, we're excited to challenge your minds and keep your learning momentum going. Kickstart your summer with a splash of learning and fun. The Summer Vacation Assignment is designed to help you retain key concepts, explore new ideas, and return to school refreshed and ready to rock! Let's make this break both relaxing and rewarding! Dive in, explore, and come back stronger!

SUMMER BUZZ FOR SUPER PARENTS

- **Make sure your child has a quiet, well-lit place to do homework.**
  Avoid having your child do homework with the television on or in places with other distractions, such as people coming and going.
- **Make sure the materials your child needs, such as paper, pencils and a dictionary, are available.**
  Ask your child if special materials will be needed for some projects and get them in advance.
- **Help your child with time management.**
  Establish a set time each day for doing homework. Don't let your child leave homework until just before bedtime.
- **Be positive about homework.**
  Tell your child how important school is. The attitude you express about homework will be the attitude your child acquires.
- **When your child does homework, you too do homework.**
  Show your child that the skills they are learning are related to things you do as an adult. If your child is reading, you read too.
- **When your child asks for help, provide guidance, not answers.**
  Giving answers means your child will not learn the material. Too much help teaches your child that when the going gets rough, someone will do the work for him or her.
- **If homework is meant to be done by your child alone, stay away.**
  Too much parent involvement can prevent homework from having some positive effects. Homework is a great way for kids to develop independent, lifelong learning skills.
- **Help your child figure out what is hard homework and what is easy homework.**
  Have your child do the hard work first. This will mean he will be most alert when facing the biggest challenges. Easy material will seem to go fast when fatigue begins to set in.
- **Reward progress in homework.**
  If your child has been successful in homework completion and is working hard, celebrate that success with a special event (e.g., pizza, a walk, a trip to the park) to, reinforce the positive effort.

Warmest wishes

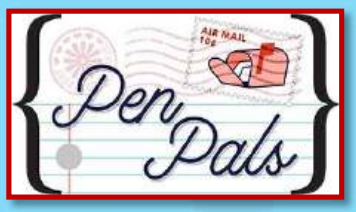
Hallmark Team

ENGLISH

1. Poetry in Motion, A Language Ocean

Write short poems based on the themes 'Expectations' and 'Social Barriers' using at least two poetic devices. Use A-4 size pastel sheets.

2. Secret Pen Pal



Write a secret message (without name) to your Pen Pal on an Inland Letter.

3. Epilogue Writing

Write a different climax of the story 'The Black Aeroplane' on A-4 size pastel sheets.

4. Words and Expressions

Do the Units 1 to 4 and 7 in the book.

नीचे दिए गए कार्य को हिंदी की कार्यपुस्तिका में करें। यह कार्य केवल अभ्यास हेतु है ताकि आप सब शब्द सीमा व समय सीमा को ध्यान में रखते हुए कार्य करने में सक्षम हो सकें। (शब्द सीमा 60–100 शब्द तथा समय सीमा 10–15 मिनट)

आत्मकथात्मक लेखन

विषय: 'एक पुस्तक की आत्मकथा'

- कल्पना करें कि आप एक पुस्तक हैं। आप अपनी कहानी, अपने पाठक, पुस्तकालय के अनुभव आदि को आत्मकथा के रूप में 100–120 शब्दों में लिखें।

भाषण लेखन : (कोई एक विषय चुनें, शब्द सीमा 100–120 शब्द)

- आज के समय में हिंदी भाषा का महत्व
- नारी शिक्षा–समाज की दिशा
- पढ़ते रहो, बढ़ते रहो

अनुच्छेद लेखन

- मेरे प्रिय लेखक
- कृत्रिम बुद्धिमत्ता (AI) और मानव जीवन
- मूल्य आधारित शिक्षा की आवश्यकता

विज्ञापन लेखन : (सामाजिक विषय पर स्लोगन, चित्र और रेखाचित्र के साथ एक विज्ञापन बनाएँ)

- प्लास्टिक हटाओ, धरती बचाओ
- जल है तो कल है

सूचना लेखनः

निम्नलिखित विषयों पर 60–80 शब्दों में सूचना तैयार कीजिए।

- विद्यालय में आगामी वार्षिक खेल दिवस के लिए खिलाड़ियों का चयन होना है। सूचना तैयार करें।
- आप अपने विद्यालय के पुस्तकालयाध्यक्ष है। छात्रों को पुस्तकें समय पर लौटाने के लिए सूचना लिखिए।

अतिरिक्त कार्यः

- 'सूचना लेखन' पर एक पोर्टफोलियों बनाएँ जिसमें सूचना लेखन का प्रारूप, उदाहरण और मुख्य बिंदु स्पष्ट किए गए हों।

MATHEMATICS

1. EXEMPLAR PROBLEMS

Do Chapters 1 to 5 in your Mathematics notebook. Do the questions from the prescribed syllabus only.

2. LAB MANUAL

Do **Activity 3, 6, 12 and 13** in the Practical File

3. SOLVE THE FOLLOWING SUMS IN YOUR MATHEMATICS NOTEBOOK:

1. For what value of p, (-4) is a zero of the polynomial $x^2 - 2x - (7p + 3)$?
2. If $(x + a)$ is a factor of $2x^2 + 2ax + 5x + 10$ find a.
3. Find the zeroes of the quadratic polynomial $5x^2 - 4 - 8x$ and verify the relationship between the zeroes and the coefficient of the polynomial.
4. If one zero of the polynomial $(a^2 - 9)\, x^2 + 13x + 6a$ is reciprocal of the other, find the value of 'a'.
5. If α and β are zeroes of the quadratic polynomial $x^2 - 6x + a$; find the value of 'a' if $3\alpha + 2\beta = 20$.
6. If α and β are the zeroes of a quadratic polynomial $x^2 + x - 2$ then find the value of $\frac{1}{\alpha} + \frac{1}{\beta}$
7. The taxi charges in a city comprise of a fixed charge together with the charges for the distance covered. For a journey of 10 km the charge paid is Rs. 75 and for a journey of 15 km the charge paid is Rs. 110. What will a person have to pay for travelling a distance of 25 km?

8. A motor boat whose speed is 24 km/hr in still water takes 1 hr more to go 32km upstream than to return downstream to the same spot. Find the speed of the stream.
9. Solve the following system of linear equations by substitution method:
   $2x - y = 2$; $x + 3y = 15$
10. If the common difference of an A.P. is 3, then find $a_{20} - a_{15}$.
11. Find the value(s) of k for which the equation $x^2 + 5kx + 16 = 0$ has real and equal roots.
12. Find the value of k, for which one root of the quadratic equation $kx^2 - 14x + 8 = 0$ is 2.
13. Places A and B are 80 km apart from each other on a highway.
    A car starts from A and another from B at the same time. If they move in same direction they meet in 8 hours and if they move towards each other they meet in 1 hour 20 minutes. Find the speed of cars.
14. If $x = 3$ is one root of the quadratic equation $x^2 - 2kx - 6 = 0$, then find the value of k
15. A plane left 30 minutes late than its scheduled time and in order to reach the destination 1500 km away in time, it had to increase its speed by 100 km/h from the usual speed. Find its usual speed
16. A motor boat whose speed is 18 km/hr in still water takes 11hrs more to go 24 km upstream than to return downstream to the same spot. Find the speed of the stream. A train travels at a certain average speed for a distance of 63 km and then travels at a distance of 72 km at an average speed of 6 km/hr more than its original speed. If it takes 3 hours to complete total journey, what is the original average speed?
17. If $ad \neq bc$, then prove that the equation $(a^2 + b^2)x^2 + 2(ac + bd)x + (c^2 + d^2) = 0$ has no real roots.
18. Find whether 55 is a term of the AP: 7, 10, 13 …or not. If yes, find which term it is.
19. Find the 20^{th} term of the AP whose 7th term is 24 less than the 11^{th} term, first term being 12.
20. The sum of the 5th and the 7th of an AP is 52 and the 10th term is 46. Find the AP.
21. If the 9th term of an AP is zero, Prove that its 29th term is twice its 19th term.

4. STUDENT PORTFOLIO ENRICHMENT ACTIVITY:

Project-1: Chronology about Indian Mathematician with their contribution Aryabhatta.

OR

Project 4: Throw light on the story of π

SCIENCE

- Ch-1 Chemical Reactions and Equations
- Ch-6 Life Processes
- Ch-10 Light- Reflection and Refraction

General Instructions:

1. Revise the above mentioned chapters and solve the following Revision Worksheet in your Science Notebook.
2. Section A has one-mark questions comprising MCQ, Case Study-based and Assertion-reason Type Questions. They are to be answered in one word or in one sentence.
3. Section B has short answer type questions. These are to be answered in about 50 - 60 words each.
4. Section C has long answer type questions.

SECTION-A

Q.1 Which of the following mirrors is used by a dentist to examine a small cavity in a patient's teeth?

(A) Convex mirror (C) Concave mirror

(B) Plane mirror (D) Any spherical mirror

Q.2 In which of the following groups of organisms, blood flows through the heart only once during one cycle of passage through the body?

(A) Rabbit, Parrot, Turtle (C) Whale, Labeo, Penguin

(B) Frog, crocodile, Pigeon (D) Shark, dog fish, sting ray

Q.3 Rays from Sun converge at a point 15 cm in front of a concave mirror. Where should an object be placed so that size of its image is equal to the size of the object?

(A) 30 cm in front of the mirror

(B) 15 cm in front of the mirror

(C) Between 15 cm and 30 cm in front of the mirror

(D) More than 30 cm in front of the mirror

Q.4 The chemical reaction between copper and oxygen can be categorized as:

(A) Displacement reaction (B) Decomposition reaction

(C) Combination reaction (D) Double displacement reaction

Q.5 How will you protect yourself from the heat generated while diluting a concentrated acid?

(A) By adding acid to water with constant stirring.

(B) By adding water to acid with constant stirring.

(C) By adding water to acid followed by base.

(D) By adding base to acid with constant stirring

Q.6 Opening and closing of stomatal pore depends on:

(A) Atmospheric temperature

(B) oxygen concentration around stomata

(C) carbon dioxide concentration around stomata

(D) water content in the guard cells

Q.7 Consider these indices of refraction: glass: 1.52; air: 1.0003; water: 1.333. Based on the refractive indices of three materials, arrange the speed of light through them in decreasing order.

(A) The speed of light in water > the speed of light in air > the speed of light in glass.

(B) The speed of light in glass > the speed of light in water > the speed of light in air.

(C) The speed of light in air > the speed of light in water > the speed of light in glass.

(D) The speed of light in glass > the speed of light in air > the speed of light in water.

Q.8 If the power of a lens is - 4.0 D, it means that the lens is a:

(A) concave lens of focal length -50 m

(B) convex lens of focal length +50 cm

(C) concave lens of focal length -25 cm

(D) convex lens of focal length -25 m

Q.9 In a person the tubule part of the nephron is not functioning at all. What will be its effect on urine formation?

(A) The urine will not be formed.

(B) Quality and quantity of urine is unaffected.

(C) Urine is more concentrated.

(D) Urine is more diluted.

Q.10 Plants use completely different process for excretion as compared to animals. Which one of the following processes is NOT followed by plants for excretion?

(A) They can get rid of excess water by transpiration.

(B) They selectively filter toxic substances through their leaves.

(C) Waste products are stored as resins and gums in old xylem.

(D) They excrete waste substances into the soil around them.

Q.11 In which of the following groups of organisms, food material is broken down outside the body and then absorbed in?

(A) mushroom, green plants, amoeba

(B) paramecium, amoeba, cuscuta

(C) yeast, mushroom, bread mould

(D) cuscuta, lice, tapeworm

Q. 12 If the real image of a candle flame formed by a lens is three times the size of the flame and the distance between lens and image is 80 cm, at what distance should the candle 14 be placed from the lens?

(A) – 80 cm (B) – 40 cm (C) – 40/3 cm (D) – 80/3 cm

Q. 13 What is common between extensive network of blood vessels around walls of alveoli and in glomerulus of nephron?

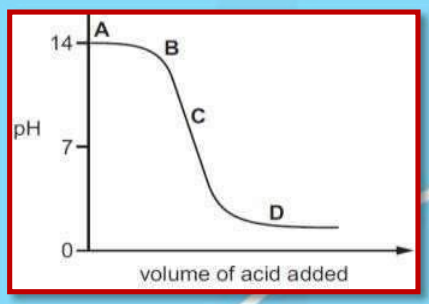
(A) Thick-walled arteries richly supplied with blood

(B) Thin-walled veins poorly supplied with blood

(C) Thick-walled capillaries poorly supplied with blood.

(D) Thin-walled capillaries richly supplied with blood

Q. 14 The graph given below depicts a neutralization reaction (acid + alkali → salt + water). The pH of a solution changes as we add excess of acid to an alkali.



Which letter denotes the area of the graph where both acid and salt are present?

(A) A (B) B (c) C (d) D

Q. 15 In the reaction of iron with copper sulphate solution: $CuSO4 + Fe \text{ ---> } Cu + FeSO4$

Which option in the given table correctly represents the substance oxidised and the reducing agent?

OPTION	Substance Oxidized	Reducing Agent
A	Fe	Fe
B	Fe	$FeSO_4$
C	Cu	Fe
D	$CuSO_4$	Fe

Q. 16 Nalini draws a ray diagram for an object in front of a concave mirror. She draws a ray starting from the top of the object and falling on the mirror perpendicularly. The ray after reflection will

(A) pass through focus.

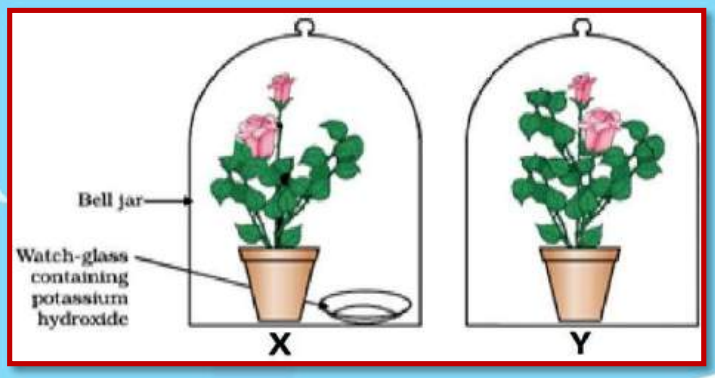
(B) pass through pole.

(C) pass through the centre of curvature.

(D) pass through any point on the principal axis.

CASE-BASED QUESTIONS

Q. 17 The Figure shown below represents an activity to prove the requirements for photosynthesis. During this activity, two healthy potted plants were kept in the dark for 72 hours. After 72 hours, KOH is kept in the watch glass in setup X and not in setup Y. Both these setups are air tight and have been kept in light for 6 hours. Then, Iodine Test is performed with one leaf from each of the two plants X and Y.



Q. 18 This experimental set up is used to prove essentiality of which of the following requirements of photosynthesis?

(A) Chlorophyll (b) Oxygen (C) Carbon dioxide (D) Sunlight

Q. 19 The function of KOH is to absorb

(A) Oxygen. (B) Carbon dioxide. (C) Moisture. (D) Sunlight.

Q. 20 Which of the following statements shows the correct results of Iodine Test performed on the leaf from plant X and Y respectively?

(A) Blue - black colour would be obtained on the leaf of plant X and no change in colour on leaf of plant Y.

(B) Blue - black colour would be obtained on the leaf of plant Y and no change in colour on leaf of plant X.

(C) Red colour would be obtained on the leaf of plant X and brown colour on the leaf of plant Y.

(D) Red colour would be obtained on the leaf of plant Y and brown colour on the leaf of plant X.

Q. 21 Which of the following steps can be followed for making the apparatus air tight?

i. placing the plants on glass plate

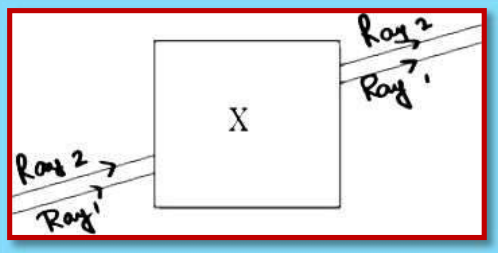
ii. using a suction pump.

iii. applying Vaseline to seal the bottom of jar.

iv. creating vacuum

(A) i and ii (B) ii. and iii (C) i. and iii (D) ii. and iv

Q.22 Noor, a young student, was trying to demonstrate some properties of light in her Science project work. She kept 'X' inside the box (as shown in the figure) and with the help of a laser pointer made light rays pass through the holes on one side of the box. She had a small butter-paper screen to see the spots of light being cast as they emerged.



Q.23 What could be the 'X' that she placed inside the box to make the rays behave as shown?

(A) a converging lens
(B) a parallel-sided glass block
(B) a plane mirror
(D) a triangular prism

Q.24 She measured the angles of incidence for both the rays on the left side of the box to be 48.60. She knew the refractive index of the material 'X' inside the box was 1.5. What will be the approximate value of angle of refraction?

(A) 45 degrees
(C) 30 degrees
(B) 40 degrees
(D) 60 degrees

(Use the value: $\sin 48.60 \approx 0.75$)

Q.25 Her friend noted the following observations from this demonstration:

i. Glass is optically rarer than air.
ii. Air and glass allow light to pass through them with the same velocity.
iii. Air is optically rarer than glass.
iv. Speed of light through a denser medium is faster than that of a rarer medium.
v. The ratio: sin of angle of incidence in the first medium to the ratio of sin of angle of refraction in the second medium, gives the refractive index of the second material with respect to the first one.

Which one of the combination of the above statements given below is correct?

(A) ii, iv and v are correct.
(B) iii and iv are correct.
(B) i, iv and v are correct.
(D) iii and v are correct.

Q.26 The object inside the box was made of a material with a refractive index less than 1.5 then the

(A) Lateral shift of the rays would have been less.
(B) Lateral shift of the rays would have been more.
(C) Lateral shift of the rays would remain the same as before.
(D) There is not enough information to comment on any of the above statements.

SECTION-B

Q.27 How can you say that acid plays an important role in our digestive system?

Q.28 Give reason:

(i) Fine hair and mucus are present in the nasal passage.

(ii) Rings of cartilage are present in the throat.

Q.29 (i) What is meant by high blood pressure?

(ii) How can high blood pressure harm us?

Q.30 Differentiate between combination and decomposition reactions with examples.

SECTION-C

Q.31 (i) Draw a diagram of the human respiratory system and label the following parts:

(a) Part where air is filtered by fine hairs and mucus

(b) Part which terminate in balloon-like structures

(c) Balloon-like structure where exchange of gases takes place

(d) Part which separate chest cavity from abdominal cavity

(ii) The breathing rate in aquatic organisms is much faster than in terrestrial organisms. Comment.

(iii) Both battery and ATP can provide energy for many different kinds of uses. Justify the statement.

Q.32 (i) Draw a neat diagram of the human digestive system and label the following parts:

(a) Part in which peristalsis occur

(b) Part which stores the bile

(c) Part which helps in absorption of nutrients from food

(ii) What is the function of the bile juice?

(iii) The release of HCl is an important factor in protein digestion in stomach. Validate the statement.

Q.33 Draw ray diagrams showing the image formation by a concave mirror when an object is placed

(A) between pole and focus of the mirror

(B) between focus and centre of curvature of the mirror

(C) at the centre of curvature of the mirror

(D) a little beyond the centre of curvature of the mirror

(E) at infinity

SOCIAL SCIENCE

Revise the PT-1 Chapters thoroughly and solve the given Revision Worksheet in the Social Science Notebook.

Q.1 How do the concepts of 'la Patrie' and 'le Citoyen' reflect the political and ideological shifts during the French Revolution?

Q.2 To what extent did the Treaty of Vienna (1815) succeed in restoring stability and balance of power in post-Napoleonic Europe?

Q.3 The decade of 1830 had brought great economic hardship in Europe". Support the statement with arguments.

Q.4 'The idealistic liberal-democratic sentiment of nationalism became a narrow creed with limited ends.' Support the statement in the context of Balkan nationalism in the early 19th century.

Q.5 Explain the dominance of landed aristocracy in Europe.

Q.6 How did the conservative regimes established in 1815 shape post-Napoleonic Europe, and how were they challenged by liberal ideologies?

Q.7 Explain how folklore, folk songs raised the spirit of nationalism in Europe.

Q.8 What conditions of Balkan areas led to World War I?

Q.9 'Water is a very important and critical resource in India.' Support the statement by explaining any three points.

Q.10 Multipurpose projects and large dams have also been the cause of many social movement'. Name any two such movements. Why these movements were launched.

Q.11 How has irrigation changed the cropping pattern? What is its impact on the social landscape?

Q.12 How does rainwater harvesting contribute to sustainable water management, and why is it important in addressing water scarcity?

Q.13 Why did Pandit Jawahar Lal Nehru proclaim the river dams as the 'Temples of Modem India?' Explain the main reason.

Q.14 Explain the ecological problems being faced due to the multi-purpose river projects.

Q.15 Examine the importance of the river valley projects in the development of hydel power and irrigational facilities in India.

Q.16 What is bamboo drip irrigation Mention any two features of it?

Q.17 Define the term:

(a) National Income (b) Gross Domestic Product

(c) Human Development Index (d) Infant Mortality rate

(e) literacy rate (f) Average income

Q.18 Who are the people that work in an unorganised sector? Mention any two social values which you have learnt from the working conditions of unorganised sector.

Q.19 Compare the different ways in which the Belgians and the Sri Lankans have dealt with the problem of cultural diversity.

Q.20 Why do we find the Belgian model very complicated? How has it helped to prevent conflict and division of the country on linguistic lines?

Q.21 Locate and label the following items on the given map with appropriate symbols:

(i) Types of soil

(ii) Crops

(iii) Dams

Revise all the Syllabus done till date!

Happy Holidays!