



**SACHDEVA
GLOBAL SCHOOL**

CLASS- X SUMMER HOLIDAY HOMEWORK 2025

ENGLISH

General Instructions:

- Language Games have been assigned Roll number-wise to students.
- Students can choose any one assignment in Literaria section.
- Ques 3 & 4 are compulsory for all and to be done as instructed.
- Handwriting should be neat and legible.
- The work should be original, creative and not copied from the Internet.
- Date of Submission: 4th July, 2025.

1. **Language Games**-Bring out your creative and playful side by inventing fun grammar and vocabulary-based games.

RNO 1 to 10

(i) **Muzzles**- Invent muzzles to test vocabulary skills of the players. Eg. The word 'close' written four times makes it to be **FORECLOSE** or the word 'cover' written under 'agent' make it to be **UNDERCOVER AGENT** etc. You may refer to the following image for ideas. Also make a dice to play the game.





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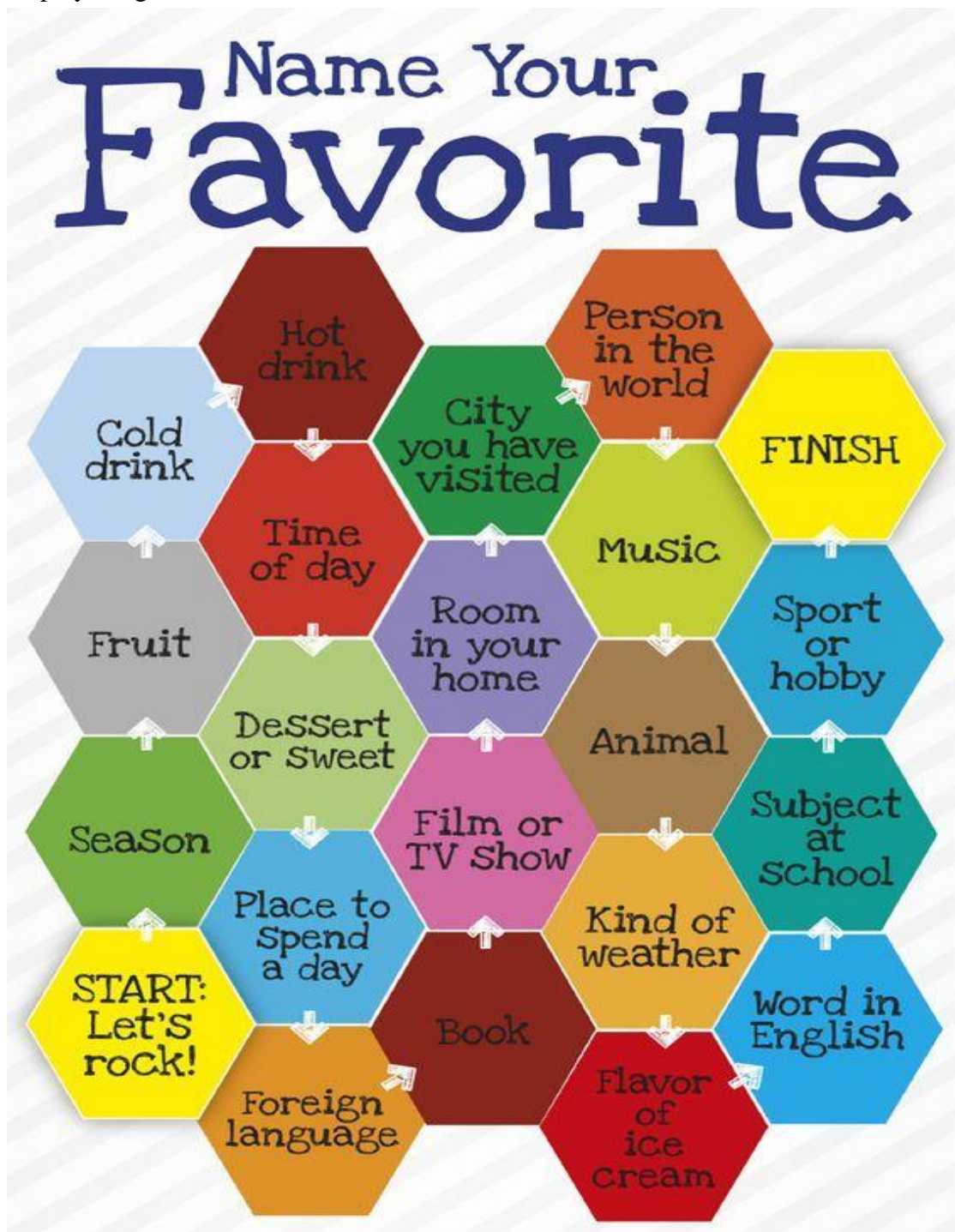
RNO 11 to 20

- (ii) **Venom Trail** – Prepare a venom trail including details of a person incorporating the areas of interests Also make a dice to play the game.




RNO 21 to 30

- (iii) **Name your favourite?** - Write a person's likes/dislikes in your game chart. Also make a dice to play the game.





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2. Literaria- Let's explore the literature lessons by critically and creatively analyzing them and present it artistically. Do **any one** of the following activity -

- (i) **Puppet Show**-Design a puppet show on 'The Frog and the Nightingale' by Vikram Seth. Design puppets, write dialogues and prepare a set up for it.
- (ii) **Timeline**- Make a timeline of the author's activities in Verona (Lesson-Two Gentlemen of Verona). Draw or paste relevant pictures with it.
- (iii) **Comic strip** - Make a comic strip of any Literature lesson from your syllabus. Use cardboard and chart paper for making it.
- (iv) **Design Facebook Page**-Design a Facebook page of **any one** of the following personalities using a cardboard or chart paper.
 - William Shakespeare
 - Albert Einstein
 - Iron Man
 - Harry Potter

3. Writing Skills

- You are Nishant/Nidhi, a resident of Agra. Write a letter to the Customer Care Department of Flipkart, complaining about the delay in the delivery of a laptop you ordered online.
- You are Neha/Manoj, a Class X student interested in pursuing a computer programming course during the summer holidays. Write a letter to the principal of a vocational training institute inquiring about the admission criteria, course duration, and facilities available for the computer programming course.
- You are Ramesh/Rita, a student of Class X at Government High School, Jaipur. Write a letter to the District Education Officer requesting additional facilities such as a computer lab and sports equipment to enhance the learning experience at your school.
- You are Ravi/Ritika, a concerned citizen of Patna. Write a letter to the editor of a national daily expressing your concerns about the rising unemployment rates in your state and suggesting measures to create more job opportunities for the youth.
- You are Priya/Rajesh, a customer of XYZ Electronics, Delhi. Write a letter to the customer service manager complaining about a defective air conditioner purchased from their store. Mention the purchase details, nature of the defect, and request a replacement or repair under warranty.
- You are the Proprietor of M/S ABC Surgicals, New Delhi. Write a letter to the Manager, M/S GTB Surgical & Co., New Delhi, placing an order for the surgical instruments.



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4. Improve your Comprehension skills- Unit-1 **Health and Medicine** of MCB Reader should be done by students in the book.

5. Virtual Tour: Take a virtual tour of **Sikkim** and write a diary entry of the activities you would do there.

➤ *It should be done in the Writing Skills Register.*

FRENCH

General Instructions:

- All questions are compulsory.
- Handwriting should be neat and legible. Assignment to be done on A4 sheet.
- Date of Submission: 3rd July, 2025.

Q1: “Le Tour de France Culturel” – Travel Scrapbook

Create a scrapbook page for a French city/region. Include a map, traditional dish, famous site, and one sentence for each on A3 size sheet. (e.g., *À Lyon, il y a des traboules. On mange la quenelle.*)

Q2: Une Affiche Touristique (Tourism Poster)

Theme : “Bienvenue au Sikkim”

Create a French tourism poster to promote the state of Sikkim, featuring images of mountains, monasteries, flowers, and local culture on an A3 sheet. Include catchy phrases in French such as « Découvrez la beauté de l’Himalaya », « Respirez l’air pur des montagnes ! » ou « Explorez la culture bouddhiste ! ».

Assignment:

Q1: Mettez le dialogue en ordre.

- A: J'ai regardé un film au cinéma avec des amis. C'était super !
 B: Moi aussi ! À tout à l'heure !
 A: Salut ! Comment ça va ?
 B: Ça va bien, merci ! Et toi ?
 B: D'accord, à 15 heures. Je suis impatient !
 A: Je vais bien aussi, merci. Tu as passé un bon week-end ?
 B: Oui, j'aimerais bien ! À quelle heure ?



A: Tu veux venir au parc cet après-midi ?

A: On peut se retrouver à 15 heures devant le café.

B: Oui, j'ai visité un musée avec mes parents. Et toi ?

Q2: Écrivez un message à votre ami(e) Marie pour lui demander si elle veut venir avec vous au parc demain après-midi. (30-35 mots)

Q3: Votre ami(e) vous a invité(e) à une fête ce week-end, mais vous êtes occupé(e). Laissez-lui un message d'environ 30 mots pour lui expliquer pourquoi vous ne pouvez pas venir.

HINDI

General Instructions:

- Roll number-wise topics have been assigned to students.
- Students need to prepare the project on topic assigned to their roll-number group.
- The project is to be prepared as per the instructions detailed below.
- Questions of this section are to be done by all the students in your Hindi notes register.
- Date of Submission: 30th June, 2025

अनुक्रमांक 1 - 10

सिक्किम में - सिक्किम की लोक कथाएँ (कहानी लेखन)

सिक्किम की लोककथाएँ किसी एक जाति या विशेष समुदाय से संबद्ध नहीं हैं, बल्कि सिक्किम के बहुविध लोकजीवन की विविध छटाएँ बिखेरती ये लोककथाएँ पाठकों को आनंदित करती हैं तथा वहाँ की संस्कृति-परंपराओं से भी परिचित करवाती हैं।

सिक्किम की किसी एक लोककथा को चित्र सहित आकर्षक रूप में लिखिए जिनमें निम्नलिखित बिंदुओं का समावेश कीजिए -

- 1 लगभग दो पृष्ठों की कहानी लिखिए।
- 2 कहानी पर आधारित चित्र चिपकाएँ अथवा चित्र स्वयं बनाएँ और रंग भरें।
- 3 कहानी का आकर्षक मुख पृष्ठ (कवर पेज) अवश्य बनाएँ।
- 4 ए-4 आकार के पेज पर कहानी लिखें।



5 कहानी टाइप न करके हाथ से साफ़ एवं स्पष्ट लिखें।

अनुक्रमांक 11 - 20

2. 'सिक्किम : एक यात्रा-वृत्तांत' - पर्यटन गाइडबुक निर्माण

विद्यार्थी सिक्किम पर आधारित जानकारी एकत्र कर आकर्षक गाइडबुक का निर्माण करें जिसमें निम्नलिखित बिंदुओं का समावेश कीजिए -

- 1 दर्शनीय स्थल, भोजन, संस्कृति, रीति-रिवाज, मानचित्र (मैप)।
- 2 विषय से संबंधित अधिक से अधिक चित्र चिपकाएँ अथवा चित्र स्वयं बनाएँ और रंग भरें।
- 3 कविता का आकर्षक मुख पृष्ठ (कवर पेज) अवश्य बनाएँ।
- 4 ए-4 आकार के पेज का प्रयोग करें।
- 5 गाइडबुक टाइप न करके हाथ से साफ़ एवं स्पष्ट लिखें।

अनुक्रमांक 21 - 30

3. कविता लेखन - सिक्किम की संस्कृति एवं प्रकृति

सिक्किम की परंपरा, त्योहार , खान - पान , जीवन शैली प्राकृतिक सौंदर्य आदि पर आधारित आकर्षक कविता लिखिए जिसमें निम्नलिखित बिंदुओं का समावेश कीजिए -

- 1 लगभग दो पृष्ठों की कविता लिखिए।
- 2 कविता से संबंधित चित्र चिपकाएँ अथवा चित्र स्वयं बनाएँ और रंग भरें।
- 3 कविता का आकर्षक मुख पृष्ठ (कवर पेज) अवश्य बनाएँ।
- 4 ए-4 आकार के पेज पर कविता लिखें।
- 5 कविता टाइप न करके हाथ से साफ़ एवं स्पष्ट लिखें।

निम्नलिखित लेखन कौशल पर आधारित प्रश्न हिंदी रजिस्टर में कीजिए -

1. आप विद्यालय की खेल समिति के सचिव हैं। स्कूल में अन्तर्सदनीय फुटबॉल प्रतियोगिता आयोजित की जा रही है। इच्छुक विद्यार्थियों को भाग लेने के लिए सूचना लिखिए।



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2. गति कंपनी की ओर से बैटरी से चलने वाले टू-व्हीलर (दुपहिया वाहन) के नए मॉडल की बिक्री बढ़ाने के लिए एक विज्ञापन बनाइए।

3. मोबाइल फोन – वरदान या अभिशाप

संकेत बिंदु:

- मोबाइल का बढ़ता प्रयोग
- फायदे
- नुकसान
- विद्यार्थियों पर प्रभाव
- संतुलित उपयोग का सुझाव

SANSKRIT

संस्कृत

अन्तिम देय तिथि – ३ /७/25

1. अण्डमान-निकोबार द्वीपेभ्यः सम्बद्धानां कस्यापि दश रोचकतथ्यस्य ब्रोशरं सज्जीकरोतु।

यथा –

(i). २० रुपयकेषु जङ्गलभागः केवलं अण्डमानद्वीपस्य एव अस्ति।

(ii). अण्डमानदेशे नारिकेलकङ्कणाः प्रचुररूपेण दृश्यन्ते। एते स्थले दृश्यमानाः बृहत्तमाः कङ्कणाः सन्ति, येषां दीर्घता १ मीटर् यावत् भवितुम् अर्हति। तेषां प्रियः आहारः नारिकेलः अस्ति, ते अपि मुखेन नारिकेलस्य दृढं शंखं भङ्क्ते।

अथवा

1. लक्षद्वीपस्य १० प्रसिद्धपर्यटनस्थलानां विषये सूचनां दत्त्वा चित्रैः सह ब्रोशरं सज्जीकरोतु।

यथा –

(i) लक्षद्वीपस्य मुख्यं आकर्षणं मिनीकोयद्वीपः -



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लक्षद्वीपस्य एकः मुख्यः आकर्षणः मिनीकोयद्वीपः अस्ति, यः लक्षद्वीपस्य ३६ लघुद्वीपेषु अन्यतमः अस्ति । मिनीकोयः स्थानीयभाषायां मालिकु इति नाम्ना प्रसिद्धः इति व्याख्यातव्यम् । मिनीकोयद्वीपः कोचीनतटतः प्रायः ४०० कि.मी.दूरे स्थितः अस्ति ।

नियोजनम् (Assignment)

एतत् कार्यं उत्तरपुस्तिकायां कुरुत -

(1) मञ्जूषातः उपयुक्तपदानि गृहीत्वा अध्ययनविषये पितापुत्रयोः संवादं पूरयतु

मञ्जूषा- अध्यापकः, विषये, गणिते, व्यवस्था, स्थानान्तरणम्, अध्ययनं, समीचीनं, काठिन्यम्।

- पिता - रमेश ! तवकथं प्रचलति ?
 रमेशः - हे पितः! अध्ययनं तु.....प्रचलति ।।
 पिता - कोऽपि विषयः एतादृशः अस्ति यस्मिन् त्वंअनुभवसि ?
 रमेशः - आम्!मम स्थितिः सम्यक् नास्ति । यतोहि अस्माकं विद्यालये इदानीं गणितस्य नास्ति।
 पिता - त्वं पूर्वं तु माम् अस्मिन्.....न उक्तवान् !
 रमेशः - पूर्वं तु अध्यापक-महोदयः आसीत् परं एकमासात् पूर्वमेव तस्य.....अन्यत्र अभवत् ।
 पिता - अस्तु । अहं तव कृते गृहे एव गणिताध्यापकस्यकरिष्यामि।
 रमेशः - धन्यवादाः।

(2) मञ्जूषायां प्रदत्तपदैः 'जयपुरभ्रमणम्' इति विषये मित्रयोः परस्परं वार्तालापं पूरयतु।

मञ्जूषा- मित्रैः, जयपुरं, कार्यक्रमः, दर्शनीयम्, यात्रानुभवविषये, द्रक्ष्यामः

- विनोदः - अंकित ! श्वः भवान् कुत्र गमिष्यति ?
 अंकितः - अहंगमिष्यामि ।
 विनोदः - तत्र किमपि कार्यं वर्तते ? अथवा एव गच्छति ?
 अंकितः - कार्यं नास्ति, अहं तु सह भ्रमणार्थं गच्छामि।
 विनोदः - जयपुरे कुत्र-कुत्र भ्रमणस्य अस्ति?
 अंकितः - वयं तत्र आमेर-दुर्गं, जयगढ़दुर्गं, गोविन्ददेव-मन्दिरं च ।
 विनोदः - तत्र नाहरगढ़-दुर्गमपि पश्यतु । तदपि अस्ति ।
 अंकितः - यदि समयः अवशिष्टः भविष्यति तर्हि निश्चयेन तत्र गमिष्यामः ।



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विनोदः – बाढ़ मित्र ! नमस्ते! इदानीम् अहं गच्छामि। सोमवासरे आवां पुनः मिलिष्यावः। तदा
वार्तालापं करिष्यावः।

(3) अधोलिखितम् अनुच्छेदं पठित्वा प्रदत्तप्रश्नानाम् उत्तराणि लिखत

ज्ञानप्राप्ति कृते अनेकानि साधनानि भवन्ति। कक्षायां वयं पुस्तकेभ्यः ज्ञानं प्राप्तुमः, परं व्यावहारिक ज्ञानं जगतः प्राप्तुं शक्यते, यद्धि जीवनाय परमोपयोगि। व्यावहारिकज्ञानस्य प्राप्ति कृते लोकव्यवहारः सर्वाधिक महत्त्वपूर्ण साधनमस्ति। लोकव्यवहारज्ञानं देशस्य विभिन्नप्रदेशानां पर्यटनेन सरलतया भवति।

सममेव तत्रत्य-संस्कृति-वेषभूषा-वातावरण-भूगोल-इतिहास-उत्सव-प्रथादीनां विषयाणां ज्ञानं भवति। एतदेव कारणं यद् विद्यालयेषु छात्राणां कृते अवकाशकाले शैक्षणिकयात्रायाः आयोजनं क्रियते।

I. एकपदेन उत्तरत

- ज्ञानप्राप्ति कृते कति साधनानि भवन्ति?
- व्यावहारिकं ज्ञानं कुतः प्राप्तुं शक्यते?
- विद्यालयेषु शैक्षणिकयात्रायाः आयोजनं कदा क्रियते?
- व्यावहारिकं ज्ञानं कस्मै परमोपयोगि?

II. पूर्णवाक्येन उत्तरत

- विभिन्नप्रदेशानां पर्यटनेन केषां ज्ञानं भवति?
- व्यावहारिकज्ञानप्राप्तये महत्त्वपूर्ण साधनं किम्?

III. प्रदत्तविकल्पेभ्यः उचितम् उत्तरं चित्वा लिखत

- 'प्राप्तुमः' इति क्रियापदस्य कर्तृपदं किम्?
(क) कक्षायाम्
(ख) वयम्
(ग) छात्राणाम्
(घ) जीवनाय
- 'विद्यार्थिनाम्' इत्यस्य किं पर्यायपदम् अत्र प्रयुक्तम्?
(क) विषयाणाम्
(ख) प्रथादीनाम्
(ग) छात्राणाम्
(घ) शैक्षणिकयात्रायाः
- 'मृत्युकाले' इत्यस्य किं विलोमपदं गद्यांशे प्रयुक्तम्?



- (क) प्राप्तुम्
 (ख) क्रियते
 (ग) जीवनाय
 (घ) सरलतया
 (iv) 'साधनानि' इति पदस्य किं विशेषण पदं प्रयुक्तम्?
 (क) आयोजनम्
 (ख) महत्त्वपूर्णम्
 (ग) अनेकानि
 (घ) विद्यालयेषु

IV. अस्य अनुच्छेदस्य कृते समुचितं शीर्षकं संस्कृतेन लिखत।

MATHEMATICS

General Instructions:

- There are two sections:
 - Section 1 is Project (allotted roll no. wise)
 - Sections 2 is an assignment; to be done in the Math Assignment register. The assignment is mandatory for all.
- Date of Submission: 26th June, 2025

SECTION 1-PROJECT

1. Working model of a **Cartesian Plane** (roll no. 1-5)
 Link: https://youtu.be/T_v7e1py1B0?si=SYczfUpTM67wZJE3
2. Working model on **Basic Proportionality Theorem** (roll no. 6-10)
 Link : <https://youtu.be/uLapPjh-m64?si=D39MnyPO7B6rpqSO>
3. Working model on **Trigonometric Ratios** (roll no. 11-15)
 Link: https://youtu.be/iXwqjHNwqBY?si=Jq3JouMdYm_fEmew
4. Working model of **Trigonometric Formulae/Identities** (roll no. 16-20)
 Link: <https://youtu.be/JicX-Fq4IG0?si=hHaMB3cm-lJkYBAe>
5. Working model on **Probability** (roll no. 21-25)
 Link : <https://youtu.be/rrDUHoU4ULU>



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6. Working model on **Application of Trigonometry** (roll no. 26 onwards)

Link: <https://youtu.be/bBnzgRvD2lA?si=a9j9QNB5pS3pe3A>

SECTION 2-ASSIGNMENT

- Q1.** Find the value of a so that the point $(3, a)$, lies on the line represented by $2x - 3y = 5$.
- Q2.** If a and $1/a$ are the zeroes of the quadratic polynomial $2x^2 - x + 8k$, then find k .
- Q3.** Determine the value of x if $\tan 3x = \sin 30^\circ + \sin 45^\circ \cos 45^\circ$.
- Q4.** If $\cot \theta = \frac{3}{4}$, prove that $\frac{\sqrt{\sec \theta - \operatorname{cosec} \theta}}{\sqrt{\sec \theta + \operatorname{cosec} \theta}} = \frac{1}{\sqrt{7}}$.
- Q5.** If $49x + 51y = 499$, $51x + 49y = 501$, then find the value of x and y .
- Q6.** The sum of the digits of a two digit number is 12. The number obtained by interchanging the two digits exceeds the given number by 18. Find the number.
- Q7.** If a and b are zeroes of $x^2 - 6x + k$. What is the value of k , for $3a + 2b = 20$?
- Q8.** Evaluate $\sin^2 30^\circ \cos^2 45^\circ + 4 \tan^2 30^\circ + \frac{1}{2} \sin^2 90^\circ - 2 \cos^2 90^\circ + \frac{1}{24}$.
- Q9.** If $\sin \theta + \sin^2 \theta = 1$, Prove that : $\cos^2 \theta + \cos^4 \theta = 1$
- Q10.** If the zeroes of the polynomial $x^2 + px + q$ are double in value to the zeroes of the polynomial $2x^2 - 5x - 3$, then find the values of p and q .
- Q11.** Prove that: $(\operatorname{cosec} \theta - \cot \theta)^2 = \frac{1 - \cos \theta}{1 + \cos \theta}$
- Q12.** Solve for x and y : $mx - ny = m^2 + n^2$, $x + y = 2m$.
- Q13.** If $7 \sin^2 A + 3 \cos^2 A = 4$, show that $\tan A = 1/\sqrt{3}$
- Q14.** Prove that $\frac{1}{\operatorname{cosec} A - \cot A} - \frac{1}{\sin A} = \frac{1}{\sin A} - \frac{1}{\operatorname{cosec} A + \cot A}$
- Q15.** Find values of a and b for which the following system of equations has infinitely many solutions.
- $$\begin{aligned} 3x + 4y &= 12 \\ (a + b)x + 2(a - b)y &= 5a - 1 \end{aligned}$$

SCIENCE

General Instructions:

- Science homework has two sections:
 - Section 1 is Model making. This has been assigned to the students roll number wise.
 - Section 2 is an assignment which is to be done in the subject notebooks. It is mandatory for all.
- Date of Submission: 3rd July 2025



Section 1- Models / Activities:

PROJECT/ ACTIVITY	ROLL NO
Prepare a working model showing different type of chemical reactions using basic ingredients available at home.	1-5
Delhi vs Sikkim : Prepare a project on comparative study Delhi and Sikkim. Illustrate the difference in water, air and soil quality.	5-10
Make 3-D models of spherical mirrors and demonstrate the formation of images for different positions of object.	11-15
Make a 3-D working model showing accommodation by eye lens.	16-20
Make 3-D model of Human Respiratory System and demonstrate the mechanism.	21- 25
Make 3-D model of Reflex Action and demonstrate the mechanism.	26 +

Section 2- Assignment

Physics

Q1. Explain why a ray of light passing through the centre of curvature of a concave mirror, gets reflected along the same path?

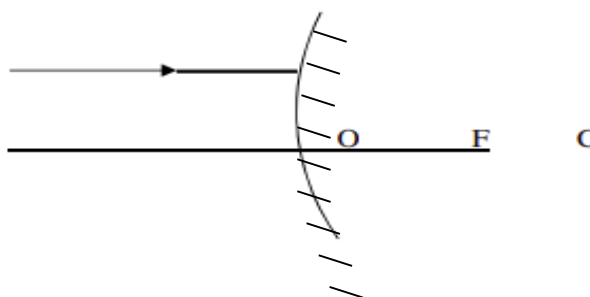
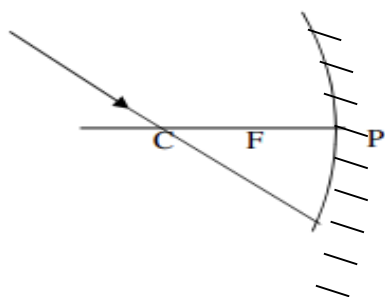
Q2. A 6 cm tall object is placed perpendicular to the principal axis of a concave mirror of focal length 30 cm. The distance of the object from the mirror is 45 cm. Use mirror formula to determine the position, nature and size of the image formed. Also draw labelled ray diagram to show the image formation in this case.

Q3. Suppose you have three concave mirrors, A , B and C of focal lengths 10 cm, 15 cm and 20 cm. For each concave mirror you perform the experiment of image formation for three values of object distances of 10 cm, 20 cm and 30 cm. By giving reason, answer the following:

- For the three object distances identify the mirror/mirrors which will form an image of magnification -1.
- Out of the three mirrors identify the mirror which would be preferred to be used for shaving purpose/makeup.
- For the mirror B draw ray diagram for image formation for object distances 10 cm and 20 cm.



Q4. Complete the following diagrams:-



Q5. If refractive indices of alcohol & water are 1.36 and 1.33 respectively, which of the two is optically denser?

Q6. Where should an object be placed for using a convex lens as magnifying glass?

Q7. Light travels from rarer medium 1 to denser medium 2. Angle of Incidence & Angle of Refraction are 45° & 30° respectively.

(i) Calculate the refractive index of second medium with respect to the first.

(ii) Calculate the refractive index of the first medium with respect to the second.

Q8. A concave lens of focal length 25 cm and a convex lens of focal length 20 cm are placed in contact with each other. What is the power of this combination? What is the focal length of the combination?

Q9. The absolute refractive index of glass and water are $\frac{4}{3}$ and $\frac{3}{2}$ respectively. If the speed of light in glass is 2×10^8 m/s, calculate the speed of light in: (i) vacuum (ii) water.

Q10. The refractive index of medium 'X' with respect to medium 'Y' is $\frac{2}{3}$ and refractive index of medium 'Y' with respect to medium 'Z' is $\frac{4}{3}$. Find the refractive index of medium 'Z' with respect to medium 'X'.

Chemistry

ASSIGNMENT

Q1. When Hydrogen Sulphide gas is passed through a blue solution of Copper Sulphate, a black precipitate of Copper Sulphide is obtained and the Sulphuric Acid so formed remains in the solution. The reaction is an example of :

- (a) combination reaction
- (b) displacement reaction



- (c) decomposition reaction
- (d) double displacement reaction.

Q2. Mention with reason the colour changes observe when:

- (a) Silver Chloride is exposed to sunlight
- (b) Copper powder is strongly heated in the presence of Oxygen
- (c) a piece of Zinc is dropped in Copper Sulphate solution

Q3. Take 3 g of Barium Hydroxide in a test tube, now add about 2 g of Ammonium Chloride and mix the contents with the help of a glass rod. Now touch the test tube from outside.

- (a) What do you feel on touching the test tube?
- (b) State the inference about the type of reaction occurred.
- (c) Write the balanced chemical equation of the reaction involved.

Q4. (a) Write one example for each of decomposition reaction carried out with help of

- (i) Electricity (ii) Heat (iii) Light
- (b) Why Copper can displace Silver from Silver Nitrate and Silver can displace Copper from Copper Sulphate solution.

Q5 (a) Identify the type of reaction(s) in the following equations.

- (i) $\text{CH}_4 + 2\text{O}_2 \rightarrow \text{CO}_2 + 2\text{H}_2\text{O}$
- (ii) $\text{Pb}(\text{NO}_3)_2 + 2\text{KI} \rightarrow \text{PbI}_2 + 2\text{KNO}_3$
- (iii) $\text{CaO} + \text{H}_2\text{O} \rightarrow \text{Ca}(\text{OH})_2$
- (iv) $\text{CuSO}_4 + \text{Zn} \rightarrow \text{ZnSO}_4 + \text{Cu}$

(b). Why does the colour of Copper Sulphate solution change when an iron nail is dipped in it? Write two observations.

Q6. Hydrogen being a highly inflammable gas and Oxygen being a supporter of combustion, yet H_2O which is a compound made up of Hydrogen and Oxygen is used to extinguish fire. Why?

Q7. When you mix Lead(II) Nitrate and Potassium Iodide solutions,

- (a) what was the colour of precipitate formed and name the precipitate.
- (b) write the balanced chemical equation for this reaction.
- (c) is this also a double displacement reaction?

Q8. What is observed when Carbon Dioxide gas is passed through lime water?

- (a) for a short duration.
- (b) for a long duration. Also write the chemical equations for the reactions involved.



Q9.To. a solution of Sodium Hydroxide in a test tube, two drops of phenolphthalein are added.

- State the colour change observed.
- If dilute HCl is added dropwise to the solution, what will be the colour change?
- On adding few drops of NaOH solution to the above mixture the colour of the solution reappears.

Q10.A cloth's strip dipped in onion juice is used for testing a liquid 'X. The liquid 'X changes its odour. Which type of an indicator is onion juice? The liquid 'X turns blue litmus red.

List

the observations the liquid 'X will show on reacting with the following :

- Zinc granules
- Solid Sodium Carbonate

Write the chemical equations for the reactions involved.

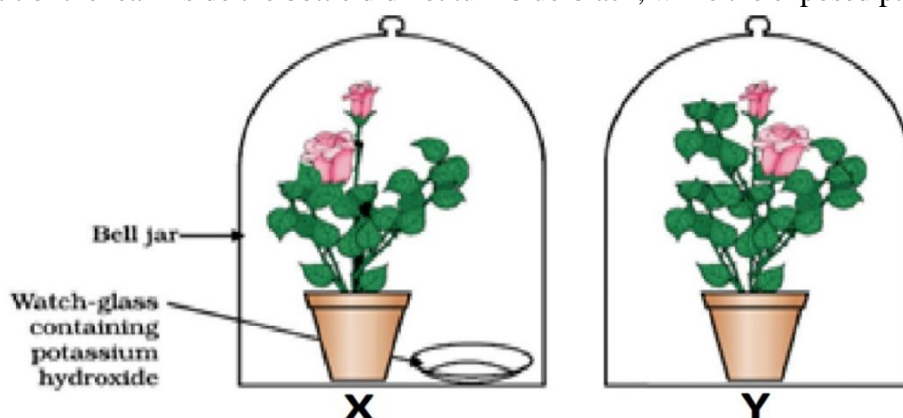
Biology

ASSIGNMENT

- How do guard cells regulate the opening and closing of stomata? Why is this function vital for plant survival?
- In which animal the heart does not pump the oxygenated blood to different parts of the body? Explain the type of circulation in that organism.
- Explain how the translocation of materials in phloem tissue in plants is achieved by utilising energy.
- Explain the process of breathing in man.
- Name the correct substrates for the following enzymes:
(a) Trypsin (b) Amylase (c) Pepsin (d) Lipase
- What do the following transport?
(iii) Pulmonary vein
(iv) Vena cava
(v) Pulmonary artery
(vi) Aorta
- Give reasons:
(a) Blood groups of donor and recipient is matched before blood transfusion.
(b) Transport system in plants is slow.
(c) Circulation of blood in aquatic vertebrates differs from that in terrestrial vertebrates.
(d) During the daytime, water and minerals travel faster through xylem as compared to the night.
(e) Veins have valves whereas arteries do not.

8. What is the significance of emulsification of fats?
9. What causes movement of food inside the alimentary canal?
10. Ritika, a student of Class 10, wanted to verify that carbon dioxide is essential for photosynthesis. She took a healthy potted plant and kept it in a dark room for 2 days to destarch the leaves. After that, she placed one of the leaves inside a glass bottle containing potassium hydroxide (KOH) using a split cork, keeping part of the leaf outside. The bottle was air-tight and transparent to allow sunlight. She then placed the plant in sunlight for a few hours.

After the experiment, she plucked the leaf and performed an iodine test. She observed that the part of the leaf inside the bottle did not turn blue-black, while the exposed part did.



Answer the following questions:

1. What is the role of keeping the plant in the dark before the experiment?
2. Why was potassium hydroxide (KOH) placed in the bottle?
3. What does the result of the iodine test indicate?
4. What conclusion can be drawn from Ritika's experiment?

PORTFOLIO ACTIVITY

Prepare a beautiful presentation on the following topics on **A3 sheets** (Mandatory). You can draw neat and colorful diagrams or paste the pictures related to your topic and can embrace it with a supportive quotation and with a decorative border of the sheet.

1. Water Conservation Methods (Roll No.- 1-5)
2. Biology is life (Roll No.- 6-10)
3. Go Green (Roll No.- 11-15)
4. Bio-revolution (Roll No.-16-20)
5. Solid Waste Management (Roll No.- 21-25)
6. Your carbon footprint (Roll No.- 26+)



SOCIAL SCIENCE

General Instructions:

- Roll number-wise topics have been assigned for students.
- Students need to prepare a project on ANY ONE topic assigned to their roll-number group.
- The project report to be prepared as per the instructions detailed below.
- Assignment Questions to be done in the notebook.
- Date of Submission: 4th July, 2025

SECTION 1

Roll Numbers: 1-11

TOPIC: Sustainable building techniques and green architecture.

OR

TOPIC: An investigation of awareness of illiterate population on consumer rights in India.

Roll Numbers: 12-22

TOPIC: Upkeep and expansion of environment friendly green places.

OR

TOPIC: Role of advertisements and social media in promoting consumer awareness.

Roll Numbers: 23 onwards

TOPIC: Development of Andaman and Nicobar and Lakshadweep Islands: strategic imperative and ecological concerns.

OR

TOPIC: A case study about economic inequalities at workplace.

Prepare a detailed project in Social Science Activity-File on the above-mentioned topic according to the following headings:

The Project File should have the following (in the order mentioned)

1. **COVER PAGE-** showing project title, school's name, student's name, class and section and academic session (2025-26).
2. **CONTENTS-** Table of contents with page number (approx. 15 pages).
3. **PROJECT OVERVIEW:** Purpose, aim, methodology and experience while doing the project.



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4. **MAIN BODY**- Chapters with relevant headings. Students must include relevant pictures and diagrams to support the project.
5. **CONCLUSION**- Summary and conclusions based on findings.
6. **BIBLIOGRAPHY**- Should have the title, pages referred, author, publisher, year of publication and if a website, the name of the website with a specific link which have been used.

NOTE: Only eco-friendly material to be used for the PROJECT.

SECTION 2

1. What is the main criterion used by the World Bank in classifying different countries? What are the limitations of this criterion, if any?
2. Kerala, with lower per capita income, has a better human development ranking than Punjab. Hence, per capita income is not a useful criterion at all and should not be used to compare states. Do you agree? Discuss.
3. There has been a big change in the three sectors of economic activities, but a similar shift has not taken place in the share of employment. Explain the above statement on the basis of facts.
4. "The Earth has enough resources to meet the need of all but not enough to satisfy the greed of even one person." How is this statement relevant to the discussion of development? Discuss.
5. Explain the various limitations of Civil Disobedience Movement.
6. Differentiate between Non-Cooperation Movement and Civil Disobedience Movement.
7. "Print not only stimulated the publication of conflicting opinions amongst communities, but it also connected communities and people in different parts of India". Elaborate.
8. Evaluate the impact of print technology on the poor people in India through examples.
9. 'Printing technology gave women a chance to share their feelings with the world outside'. Support the statement with any five suitable examples.
10. Read the source given below and answer the following questions.
Print created the possibility of wide circulation of ideas, and introduced a new world of debate and discussion. Even those who disagreed with established authorities could now print and circulate their ideas. Through the printed message, they could persuade people to think differently, and move them to action. This had significance in different spheres of life. "The implication of this in one sphere of life in early modern Europe - namely, religion. In 1517, the religious reformer Martin Luther wrote Ninety-Five Theses criticising many of the practices and rituals of the Roman Catholic Church".
 - i) Why was print not welcomed by everyone?
 - ii) Who was Martin Luther? What did he say about 'printing'?
 - iii) What do you mean by 'protestant reformation'?



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ARTIFICIAL INTELLIGENCE

General Instructions:

- Roll number-wise topics have been assigned for students.
- AI holidays homework has two sections: -
 - Section 1 is Chart / Movie making; Make the models according to the allotted roll numbers.
 - Sections 2 is compulsory for all –Project and assignment (Both to be done)
- Assignment Questions to be done in the Artificial Intelligence notes register by all students.
- Date of Submission: 3rd July,2025

Section 1:

1. Create a collage/ Board game on 'Generative AI tools' (Roll No.1-10)

Generative AI has become a showstopper. It is a type of artificial intelligence that creates new content like text, images, music, and videos. It uses foundation models, large AI models that can perform various tasks and adapt to specific use cases with minimal training. This allows for the generation of novel and realistic content, including text, images, and even entire video games.

Students are required to collect information about:

- Latest Generative AI tools?
- Their developers
- How do they work?



2. Create a movie/ PPT/ poem on 'Role of AI in Healthcare' (Roll No. 11-20)

Generative AI is transforming healthcare by offering powerful tools for diagnosis, treatment planning, drug discovery, and streamlining operations. It can analyse large datasets to identify patterns, predict disease trajectories, and recommend personalized treatment strategies.

Rules:

- The duration of the movie should not exceed 2 minutes.
- Movie to be submitted in .mp4 format only.
- The movie should be uploaded on YouTube and unlisted link should be mailed.



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Design a layout of a Mobile App on a chart to solve a Local Problem in Your Area (e.g., water wastage, traffic, waste). (Roll No. 21-30)

Students are required to collect more information about the local problems in your area. Also create a 4W canvas for the same.

3. In present time, technology with GANs AI must be implemented in an economically feasible way to strengthen various fields like Agriculture, Textile, Manufacturing, Construction, Tourism, Offline Education etc. Keeping this in mind, the students must pick one such field and present their idea in an investor-pitch-style presentation/ video. The proposal should be economically viable. (Roll no. 21-30)

Students are required to make a presentation (maximum 10 slides) or video (maximum two minutes), showcasing their product/service. The presentation/video should include the following:

- One slide describing the issue and two or more slides for the solutions and various features of the product/service.
- One slide should mention how AI would help in solving the problem.
- A prototype/application preview showcasing the working of the product / service is a must.

An assignment will be shared on GC for the submission of the PPT/Movie.

4. Make any one AI Model / Dice Game / Unscramble Words from Letters / Jigsaw Puzzle on Artificial Neural Network. (Roll no. 31 onwards)

For example:

- A puzzle where players must connect inputs to correct outputs through a network path (like neurons).
- Color-coded paths, with blockers like "noise" or "bias nodes".
- Visualizes how neural networks route information.

Section 2:

AI Project:

1. Make a creative AI model on 'Plant Health Checker'.

Tools: Teachable Machine/ Microsoft Lobe (with healthy/sick leaf images).





Worksheet

QI Multiple Choice Questions:

1. What is the purpose of defining the problem statement during the Problem Scoping stage in an AI project cycle?
 - a. To collect data
 - b. To understand the aim and objective of the project
 - c. To train the model
 - d. To process data

2. In what ways can AI models be categorized based on the type of data fed into them?
 - a. Two domains
 - b. Four domains
 - c. Three domains
 - d. Five domains

3. In Statistical Data, what is the primary function of the system in relation to data?
 - a. Generating large datasets
 - b. Analysing data to extract insights
 - c. Converting data into images
 - d. Distributing data across networks

4. What is the main goal of Computer Vision projects?
 - a. Translating audio data into visual descriptions
 - b. Converting digital data into analogue signals
 - c. Teaching machines to understand textual information
 - d. Converting digital visual data into computer-readable language

5. What is the primary focus of NLP?
 - a. Analysing computer languages
 - b. Interacting between computers and humans using artificial language
 - c. Dealing with the interaction between computers and humans using natural language
 - d. Enhancing human-to-human communication

6. What do frameworks provide in the context of problem-solving?
 - a. Random solutions
 - b. Step-by-step guidance
 - c. Legal advice
 - d. Ethical justifications

7. How are Ethical Frameworks for AI categorized?
 - a. Into legal and illegal frameworks
 - b. Into sector-based and value-based frameworks
 - c. Into historical and contemporary frameworks
 - d. Into theoretical and practical frameworks



8. What is the central focus of virtue-based value-based frameworks?
 - a. Maximizing utility
 - b. Protecting human rights
 - c. Aligning actions with ethical principles and beliefs
 - d. Ensuring compliance with legal regulations
9. Which of the following best describes rights-based value-based frameworks?
 - a. Prioritizing human rights and dignity, valuing human life over other considerations
 - b. Evaluating actions based on maximizing overall good and minimizing harm
 - c. Centering on the character of the decision-maker and the alignment of actions with personal or societal virtues
 - d. Focusing on achieving outcomes that offer the greatest benefit
10. What is the primary domain of application for Bioethics?
 - a. Agriculture
 - b. Healthcare and life sciences
 - c. Information technology
 - d. Environmental conservation

Q2. Answer the following questions:

- a. How do you understand whether a machine/application is AI based or not? Explain with the help of an example.
- b. How do value-based frameworks contribute to ethical decision-making by emphasizing fundamental principles and values?
- c. Your grandmother watches you use AI applications. She wants to understand more about it. Help her understand the term artificial intelligence by giving the right definition and explain to her with an example how machines become artificially intelligent.
- d. Mention the factors that knowingly or unknowingly influence our decision-making.
- e. What do you mean by bioethics?

ART & CRAFT

GENERAL INSTRUCTIONS:

- Craft work and book pages are mandatory for all the students.
- Painting to be done on A3 size sheet by all students.
- **Date of submission:** 3rd July 2025

I am an Artist - 23,24,25 (ART BOOK)

Page no - 74 : Indian folk painting ‘Mahbubani art’“(to be done in sketch file).

Page no – 70 : poster on water conservation or save environment (any one)to be done in sketch file.

CRAFT WORK

In Sikkim handicrafts is a source of income for the habitants of Sikkim. Their handicrafts is famous all around the world. Prepare a **jute bag painting** using required materials.

