# THE VOYAGE OF LEARNING

*A Summer Message from the Desk of the Director*

***"Learning is a treasure that will follow its owner everywhere."***

**Dear Parents and Students,**

As we approach the vibrant summer break, I extend my warmest wishes to all our students and their families. Vacations are a wonderful time to relax, rejuvenate, and create beautiful memories together. However, it is also a golden opportunity to keep the spark of curiosity alive.

**Important Summer Schedule**

- **Summer Vacation Begins: Friday**, 29th May 2026
- **Summer Vacation Concludes:** Tuesday, 30th June 2026
- **School Reopens:** Wednesday, 1st July 2026 (at the usual school time)

Our **Holiday Homework** has been thoughtfully designed not as a burden, but as a bridge—a way to connect classroom learning with creative, real-world exploration from **29th May to 30th June**. It aims to foster independent thinking, creativity, and self-discipline in our students.

## TO OUR DEAR STUDENTS

Use this time to read widely, explore new hobbies, and engage deeply with the projects assigned to you. Challenge yourselves, stay curious, and remember that consistent, daily efforts make learning effortless.

## TO OUR RESPECTED PARENTS

We view education as a shared partnership. We kindly request you to guide and supervise your children as they work through their assignments. Encourage them to manage their time effectively so they can balance both recreation and learning throughout this break. Your encouragement is the greatest catalyst for their academic growth.

Let us utilize this break to discover new passions and return to school on **1st July, 2026** with renewed energy, enthusiasm, and a deeper love for learning.

We wish you all a safe, happy, and intellectually fulfilling summer vacation!

Warm regards,

**Director**
**Jaycees Public School**

# JAYCEES PUBLIC SCHOOL, RUDRAPUR
## Session: - 2026-27
## Class- X
## Summer Break Holiday Homework

**ENGLISH:-**

**Instructions for All the Students**

- Complete all the work neatly in a file (Use A4 size papers)
- Complete work neatly and creatively.
- Use proper headings and dates.
- Learn important word meanings and authors' names.
- Learning activities are compulsory for all students.
- Submit the homework on time.
- Roll Number-wise Distribution of English Holiday Homework

**Roll No.1-15: Q.1, 2, 4, 5, 6, 7**
**Roll No.16-30: Q.1, 3, 4, 8, 9, 10**
**Roll No. 31-50 Q. 1, 2, 3, 7, 8, 9**

**Theme: Freedom & Courage-**

**Section-A Literature Based Activities**

1. Imagine you are the tiger from A Tiger in the Zoo. Write a diary entry expressing your feelings about captivity and your desire for freedom.
2. Write a letter from the young seagull (His First Flight) to the tiger, advising him on how to overcome fear and find inner freedom.
3. Write a short script with a zoo keeper, a tiger, and a wildlife activist discussing whether animals should be kept in captivity.
4. What lessons about fear, courage, and freedom do we learn from the tiger, the seagull, and the pilot?

**Section-B-Creative Expression**

5. Write a short story on 'My First Experience of Courage'.
6. Design a poster on 'Say No to Captivity' with a slogan and drawing.
7. Imagine you are the pilot from The Black Aero plane. Write a diary entry about your experience in the storm.
8. 'Freedom is a state of mind.' Compare the tiger and the seagull. Who is truly free and why?
9. 'Zoos are necessary for education and conservation.' Write arguments for or against.
10. 'Fear disappears when we take the first step.' Explain with reference to the seagull and the pilot.

**Compulsory for all the students (Use A4 size fluorescent sheets)**

**Section-C- Vocabulary & Learning Activity**

11. Prepare a list of important word meanings from each chapter.
**A Tiger in the Zoo, His First Flight & The Black Aero plane**

12. Write the names of all the Poets and Authors from the chapters included in your English syllabus. Also write the names of their famous works.
13. Prepare a mind map showing the connection between fear, courage, and freedom.

**HINDI:-**

निर्देश :
1. समस्त गृहकार्य A4 फाइल में करना है।
2. संपूर्ण गृहकार्य रंगीन (Colour Printed) पेपर पर करें।
3. प्रत्येक कार्य साफ-सुथरी एवं सुंदर लिखावट में करें।
4. समूह के अनुसार दिए गए सभी कार्य अनिवार्य हैं।

समूह – 1 (साहित्य सृजन समूह) | रोल नंबर : 1–10
कार्य :1. निम्न में से किसी एक विषय पर रचनात्मक लेखन कीजिए –

* "मेरे जीवन का सबसे प्रेरणादायक व्यक्ति"
* "प्रकृति और हम"
* "प्रकृति की ओर लौटो"

2.सरल, संयुक्त एवं मिश्र वाक्य के पाँच–पाँच उदाहरण लिखिए।
3."मेहनत का महत्व" अथवा "आत्मविश्वास की शक्ति" विषय पर एक प्रेरणादायक कविता लिखकर याद कीजिए।
4.उत्तर भारत के निम्न राज्यों – उत्तराखंड, उत्तर प्रदेश, राजस्थान, पंजाब में से किसी एक राज्य की यात्रा का रोचक यात्रा-वृत्तांत लिखिए।
अथवा
दक्षिण India – केरल, तमिलनाडु, कर्नाटक, आंध्र प्रदेश में से किसी एक राज्य की यात्रा का रोचक यात्रा-वृत्तांत लिखिए।
5.पढ़ाए गए पाठों के आधार पर मुहावरों से युक्त 10 वाक्य बनाइए।
6.निम्न में से किसी एक विषय पर माइंड मैप तैयार कीजिए –

* समास
* पदबंध
* वाक्य भेद

समूह – 2 (व्याकरण एवं भाषा कौशल समूह) | रोल नंबर : 11–20
कार्य : 1. निम्न में से किसी एक विषय पर माइंड मैप तैयार कीजिए –

* समास
* पदबंध
* वाक्य भेद

2.पढ़ाए गए पाठों के आधार पर मुहावरों से युक्त 10 वाक्य बनाइए।
3."सकारात्मक सोच", "संघर्ष ही जीवन है" अथवा "सपनों की उड़ान" विषय पर आधारित किसी

प्रेरणादायक कविता को सुंदर लिखावट में लिखकर याद कीजिए।
4.राजस्थान की संस्कृति, वेशभूषा एवं भाषा से संबंधित जानकारी एकत्र कर संक्षिप्त विवरण लिखिए।
5.सरल, संयुक्त एवं मिश्र वाक्य के पाँच–पाँच उदाहरण लिखिए।

समूह – 3 (अभिनय एवं प्रस्तुति समूह) | रोल नंबर : 21–30
कार्य : 1. निम्न में से किसी एक विषय पर अनुच्छेद लिखिए –
* "आत्मविश्वास की शक्ति"
•"संघर्ष ही जीवन है"
2.नीचे लिखे तीर्थ स्थलों में से किसी एक तीर्थ स्थल की यात्रा पर आधारित संवाद अथवा लघु प्रस्तुति तैयार कीजिए –
* हरिद्वार
* वाराणसी
* बद्रीनाथ
* केदारनाथ
3.सरल, संयुक्त एवं मिश्र वाक्य के पाँच–पाँच उदाहरण लिखिए।
4.पढ़ाए गए पाठों के आधार पर मुहावरों से युक्त 10 वाक्य बनाइए।
5.निम्न में से किसी एक विषय पर माइंड मैप तैयार कीजिए –
* समास
* पदबंध
* वाक्य भेद

समूह – 4 (शोध एवं परियोजना समूह) | रोल नंबर : 31 से आगे के सभी विद्यार्थी
कार्य :1. "परिश्रम", "अनुशासन" अथवा "सकारात्मक सोच" विषय पर प्रेरणादायक कविताओं का संग्रह तैयार कीजिए तथा उनमें से किसी एक कविता को याद कीजिए।
2.जम्मू-कश्मीर राज्य की विशेषताओं (भोजन, संस्कृति, पर्यटन, भाषा आदि) पर परियोजना तैयार कीजिए।
3.सरल, संयुक्त एवं मिश्र वाक्य के पाँच–पाँच उदाहरण लिखिए।
4.पढ़ाए गए पाठों के आधार पर मुहावरों से युक्त 10 वाक्य बनाइए।
5.निम्न में से किसी एक विषय पर माइंड मैप तैयार कीजिए –
* समास
* पदबंध
* वाक्य भेद

## विषय - संस्कृत

प्रश्न 1.विभिन्न संस्थाओं के संस्कृत में ध्येय वाक्य (moto)होते हैं- जैसे - उच्चतम न्यायालय भारत - यतो धर्मस्ततो जयः
केन्द्रीय माध्यमिक शिक्षा बोर्ड,
श्रम मन्त्रालय- श्रम एव जयते,
डाक तार विभाग- अहर्निशं सेवामहे

इसी प्रकार निम्नलिखित विभागों के ध्येय वाक्य लिखिए -

1.केन्द्रीय माध्यमिक शिक्षा बोर्ड

2.भारतीय प्रसाशनिक सेवा अकादमी

3.एन० सी० ई० आर० टी०

4.जल सेना

5. वायुसेनाप्रश्न

प्रश्न 2. अपनी पाठ्य पुस्तक शेमुषी से उत्व सन्धि , रत्व सन्धि, शत्व और सत्व सन्धि के पांच पाचं उदाहरण लिखिये।

प्रश्न 3 .अपना परिचय पांच वाक्य में संस्कृत में लिखिए।

प्रश्न 4. निम्नलिखित विषयों पर अनुच्छेद लिखिए - अस्माकं देशः, विद्यायाः महत्त्वं, प्रश्न 4.सन्धि वा सन्धि विच्छेद म् क्रियताम् -

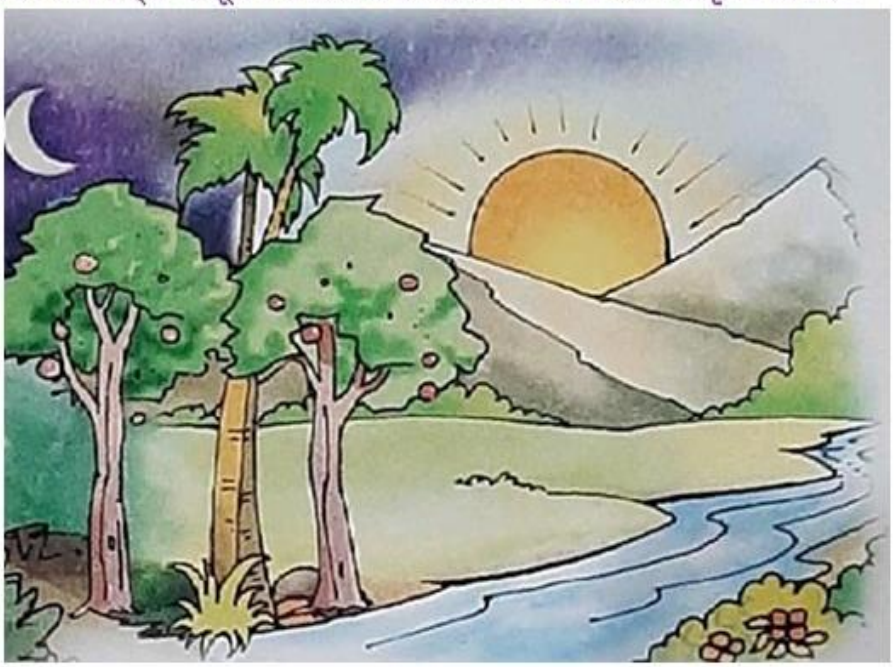
| | | | |
|---|---|---|---|
| 1.सम्यक्+नेता | 2.वानरः+तु | 3.सम्यगुक्तम् | 4.यत्+ मयूरः |
| 5.लाभस्तेषां | 6.षडविधिं | 7.इतस्ततः | 8.चौरः+अयम् |
| 9.पुनः+तौ | 10.प्रबुद्धः+अतिथिः | 11.अभियुक्तः+ च | 12.तपः+तेपे |
| 13.भवेद्येन | 14.कुर्यादहितं | 15.प्रथमो धर्मः | |
| 16.विचित्रः+अयम् | | | |
| 17.शिशवः+तु | 18.प्राणेभ्यः+अपि | 19.आत्मनः+अधिकारः | |
| 20.सज्जनः+अस्मि | 21.अनुग्रहीतः+अस्मि | 22. भूयोभूयः | 23. अन्यः+अन्यम् |
| 24.पितुः+गृहम्, | 25.नमस्तुभ्यं | 26.सत्+मार्गम् | 27. शुचिरिह। |
| 28. अचिरादेव | 29. सरः+तीरे | | |
| | | 30. उदीरतः+अर्थः | |

प्रदत्तं चित्रं दृष्ट्वा मञ्जूषायां प्रदत्तशब्दानां सहायतया **पञ्च वाक्यानि संस्कृतेन लिखत** ।

**मञ्जूषा**

उद्यानम्, धावतः, जनौ, वातावरणम्, नगरस्य, महिला, वृक्षाः, साधारणम्, विशालभवनानि, बसस्थानम्, स्वच्छम्, प्रतीक्षाम्, तिष्ठन्ति, अवकरपात्रम् ।

* प्रदत्तं चित्रं दृष्ट्वा मञ्जूषायां प्रदत्तशब्दानां सहायतया पञ्च वाक्यानि संस्कृतेन लिखत –



**मञ्जूषा**

| |
|---|
| वहति, उद्यानस्य, पुष्पाणि, नदी, वृक्षाः, आकाशे, पर्वतः, दृश्यम्, हरीतिमा, सूर्यः, चन्द्रः, उदेति, प्राकृतिकम्, पादपाः। |

अधः प्रदत्तं चित्रं दृष्ट्वा मञ्जूषायां प्रदत्तशब्दानां सहायतया **पञ्च वाक्यानि संस्कृतेन लिखत** :

**मञ्जूषा**

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|---|
| नगरस्य, स्तः, भवनानि, बालौ, उड्डयन्ति, पादपान्, पर्यावरणम्, प्रसन्नौ, पक्षिणः, जलपात्रम्, शुद्धम्, भवेयुः, जागरूकाः, सर्वत्र । |

**MATHEMATICS: -**

1. Show that the following numbers are irrational:
(i)√3 (ii)3-7√5
2. In a school, the duration of a period in junior section is 40 minutes and in senior section is 1 hour. If the first bell for each section ring at 9:00 a.m., when will the two bells ring together again?
3. Explain why (17 × 11 × 2 + 17 × 11 × 5) is a composite number?
4. If α and β are the zeros of the quadratic polynomial $6x^2 + x - 2$ ,find the value of:
(i) $\frac{\alpha}{\beta} + \frac{\beta}{\alpha}$ (ii) $\alpha^3 + \beta^3$
5. Find the zeros of polynomial $x^2 - 2x - 8$ and verify the relationship between the zeros and their coefficients
6. If 21cosec θ = 29, find the value of $\frac{Cos^2\theta - Sin^2\theta}{1 - 2Sin^2\theta}$
7. If sin (A+2B) =$\frac{\sqrt{3}}{2}$ and cos (A + 4B) = 0, find the values of angles A and B
8. Given that sin (A + B) = sin A cos B + cos A sin B, find the value of sin 75°
9. If tan θ + sin θ = m and tan θ – sin θ = n, prove that $m^2 - n^2 = 4\sqrt{mn}$
10. Prove that $\frac{Tan\theta}{1 - Cot\theta} + \frac{Cot\theta}{1 - Tan\theta} = 1 + Tan\theta + \text{Cot}\theta$
11. Find whether the following pair of linear equations is consistent or inconsistent:
3x + 2y = 8; 6x – 4y = 9
12. Solve the following pair of linear equations for x and y:
(i) 141x + 93y = 189;
93x + 141y = 45
(ii) (a – b)x + (a + b) y = $a^2 - 2ab - b^2$ ;
(a + b)(x + y) = $a^2 + b^2$
13. A train covered a certain distance at a uniform speed. If the train would have been 10 km/h faster, it would have taken 2 hours less than the scheduled time. And, if the train were slower by 10 km/h; it would have taken 3 hours more than the scheduled time. Find the distance covered by the train.
14. The present age difference between father and son is 14 years. The ratio of their age will be 4:3 after 11 years. How old is son now?
15. Places A and B are 100 km apart on a highway. One car starts from A and another from B at the same time. If the cars travel in the same direction at different speeds, they meet in 5 hours. If they travel towards each other, they meet in 1 hour. What are the speeds of the two cars?
16. Draw the graphs of the equations 5x – y = 5 and 3x – y = 3. Determine the co-ordinates of the vertices and area of the triangle formed by these lines and the y axis.
17. Consider the following distribution of $SO_2$ concentration in the air (in ppm = parts per million) in 30 localities. Find the mean $SO_2$ concentration using the assumed mean method. Also, find the values of A, B and C.

| $Class\ Interval$ | $Frequency(f_i)$ | $Class\ mark(x_i)$ | $d_i = x_i - a$ |
|---|---|---|---|
| $0.00 - 0.04$ | 4 | 0.02 | $-0.08$ |
| $0.04 - 0.08$ | 9 | 0.06 | $A.....$ |
| $0.08 - 0.12$ | 9 | 0.10 | $B.....$ |
| $0.12 - 0.16$ | 2 | 0.14 | 0.04 |
| $0.16 - 0.20$ | 4 | 0.18 | $C.....$ |
| $0.20 - 0.24$ | 2 | 0.22 | 0.12 |
| $Total$ | $\sum f_i = 30$ | | |

18. A survey regarding the heights (in cm) of 50 girls of class X of a school was conducted and the following data was obtained. Find the mean, median and mode of the given data.

| **Heights (in cm)** | 120 – 130 | 130 – 140 | 140 – 150 | 150 – 160 | 160 – 170 |
|---|---|---|---|---|---|
| **No. of Girls** | 2 | 8 | 12 | 20 | 8 |

19. The median of the distribution given below is 14.4. Find the values of x and y, if the sum of frequency is 20.

| **Class Interval** | 0 – 6 | 6 – 12 | 12 – 18 | 18 – 24 | 24 – 30 |
|---|---|---|---|---|---|
| **Frequency** | 4 | *x* | 5 | *y* | 1 |

20. The following distribution gives the daily income of 50 workers of a factory. Find the median of the given data.

| Daily income (inRs): | No of workers |
|---|---|
| Less than 120 | 12 |
| Less than 140 | 26 |
| Less than 160 | 34 |
| Less than 180 | 40 |
| Less than 200 | 50 |

21. **CASE STUDY**

Transport department of a city wants to buy some electric buses for the city. For which they want to analyse the distance travelled by existing public transport buses in a day. The following data shows the distance travelled by 60 existing public transport buses in a day.

| Daily distance travelled (in km) | Number of buses |
|---|---|
| 200 – 209 | 4 |
| 210 – 219 | 14 |
| 220 – 229 | 26 |
| 230 – 239 | 10 |
| 240 – 249 | 6 |

Based on the above information, answer the following questions.
(i) What is the difference of upper limit of a class and lower limit of its succeeding class?
(ii) What is the median class?
(iii) What is the cumulative frequency of the class preceding the median class?
(iv) What is the median of the distance travelled?
(v) If the mode of the distance travelled is 223.78 km, then what is the mean of the distance travelled by the bus?

***Activity (for all students)***

*Introduction to Trigonometry Activity*

Activity: Height and Shadow Investigation

A student observes the shadow of a tree in sunlight.Height of the student = 5 ft and Length of shadow = 5 ft

Using trigonometric ratios, perform the following tasks:

1. Draw a right-angled triangle representing the situation.
2. Label:
   Perpendicular, Base and Hypotenuse
3. Find the value of tan x and how tan x is related to cot x

4. Determine the angle formed by the sunlight.
5. Draw a colorful diagram showing:
   * Sun
   * Tree/student
   * Shadow
6. Write the trigonometric ratios:
   * sinx
   * cosx
   * cosec x
7. Mention any three real-life applications of trigonometry.
8. Write your observation and conclusion from the activity.

***Activity (for even roll numbers)***

Activity 1: Magic of HCF and LCM

Your school is organizing a "Maths Fun Fair". Three groups of students have brought packets containing different numbers of chocolates and candies.

* Group A has 24 chocolates and 36 candies.
* Group B has 45 chocolates and 60 candies.
* Group C has 72 chocolates and 90 candies.

Using Prime Factorisation Method, answer the following:

1. Draw colorful factor trees for all the given numbers.
2. Find the HCF and LCM for:
   * 24 and 36
   * 45 and 60
   * 72 and 90
3. Verify whether:
   HCF*LCM = Product of the two numbersfor any two pairs.
4. Prepare a colorful table showing:
   * Prime factors
   * HCF
   * LCM
5. Write any three real-life applications of HCF and LCM.
6. Create a creative "Number Web" using numbers from 1 to 30 and color:
   * Prime numbers in Green
   * Composite numbers in Red
7. Write your observation and conclusion about what you learned from this activity.

Statistics Activity

Activity 2: Class Survey Report

Conduct a survey in your class on any one of the following topics:

* Favourite subject
* Daily study hours
* Maths test marks
* Favourite sport

Collect data from at least 15 students and perform the following tasks:

1. Prepare a frequency distribution table.
2. Find:
   Mean, Median and Mode
3. Represent the data using:
   Bar graph

4. Compare the three measures and write which one best represents the data.
5. Decorate the activity creatively using charts, symbols, or drawings related to your topic.
6. Write any three observations from the collected data.
7. Write the conclusion and learning outcome of the activity.

***Activity (for odd roll numbers)***

Polynomials Activity

Activity 1: Polynomial Face Art

A designer is creating a "Maths Cartoon Poster" using polynomial expressions. Different parts of the cartoon face are represented by different polynomials.

Use the following polynomials:
$X^2 - 9$
$X^2 + 5x + 6$
$X^2 - 4x + 3$

Perform the following tasks:
1. Find the degree of each polynomial.
2. Find the zeroes of each polynomial.
3. Factorise all the given polynomials.
4. Draw rough graphs of the polynomials on graph paper.
5. Mark the points where the graphs cut the x-axis.
6. Create a colorful cartoon face using the curves and graphs of the polynomials.
7. Write any three observations about the relationship between zeroes and factors of a polynomial.
8. Write a conclusion explaining what you learned from this activity.

Linear Equations in Two Variables Activity

Activity 2: Canteen Budget Planner

During a school event, a student buys burgers and cold drinks from the canteen.

* Cost of one burger = ₹50
* Cost of one cold drink = ₹20
* Total amount spent = ₹200

Using this information:

1. Form a linear equation in two variables.
2. Prepare a table of at least five possible values of burgers and cold drinks.
3. Plot these values on graph paper.
4. Draw the graph of the equation.

5. Identify any three points lying on the graph.
6. Explain what each point on the graph represents.
7. Design a colorful mini canteen menu around your graph.
8. Write your observations and conclusion from the activity.

**SCIENCE: -**

**Physics** -Prepare a model/chart of:

a. Periscope **(R.No.1-12)**
b. Kaleidoscope **(R.No.13-24)**
c. Projector **(R.No.25-36)**
d. Pinhole Camera **(R.No.37onwards)**

**Chemistry –** Show in Chart/A4 size paper

a. Identify the nature of any five food items (fruit/Vegetable) with the help of natural indicators like turmeric or china rose. **(R.No.1-12)**
b. Using a pH strip, Categorise the naturally occurring substances as acids, bases & neutral compounds (water, coffee, onion peel, milk, mustard oil, lemon juice, carbonated drink etc.)**(R.No.13-24)**
c. Tabulate 5 natural and man-made acids write their uses, physical properties and pH .**(R.No.25-36)**
d. Write 5 acids and bases and show their neutralization reaction. Identify the nature of salt formed. **(R.No.37onwards)**

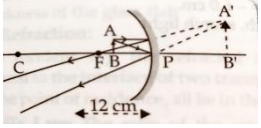
**Biology –** Prepare :

a. Model or Chart of Human Digestive System / herbarium file of medicinal plants(at least 5 species) **(R.No.1-12)**
b. Model or Chart of Human Respiratory System / herbarium file of Ornamental plants(at least 5 species) **(R.No.13-24)**
c. Model or Chart of Human Circulatory System / seed germination observation file **(R.No.25-36)**
d). Model or Chart of Human Excretory System/plant diversityscrapbook **(R.No.37onwards)**

**Common Homework: (To be done in the fair notebook)**

**Physics**

1.For what position of an object a concave mirror forms a real image equal in size?
2.List two characteristics of image formed by a plane mirror?
3.It is desired to obtain an erect image of an object using a concave mirror of focal length 12 cm.
a. What should be the range of the object distance in the above case
b. Will the image be smaller or larger than the object. Draw a ray diagram to show the image formation in this case.



c. Where will be the image of this object be if it is placed 24 cm and front of the mirror?
4. What is the unit of refractive index? The refractive index of flint glass is 1.65 and that for alcohol is 1.36 with respect to air. In which medium speed of light will be more? Why?
5. Name the type of mirror used in the following situation and Support your answer with reason
a. Headlight of a car. B. Rear view mirror of a vehicle. C. Solar furnace.
6. A Pencil when dipped in water in a glass tumbler appears to be bent and the surface of air and water. Will the pencil appear to be bent to the same extent if instead of water we use liquids like kerosene or turpentine. Support your answer with the reason.
7. Note down Expt. No. 10.1,10.2, 11,12 in the lab manual. (Except theory and procedure).

## Chemistry

**Write a balanced chemical equation for the following reactions-**

1. Silver bromide on exposure to sunlight decomposes into silver and bromine.
2. Sodium metal reacts with water to form sodium hydroxide and hydrogen gas.
3. Solution of barium chloride and sodium sulphate in water reacts to give insoluble barium sulphate and solution of sodium chloride.
4. Hydrogen gas combines with nitrogen to form ammonia.
5. Hydrogen sulphide gas burns in air to give water and sulphur dioxide.
6. Barium chloride reacts with ammonium sulphate to give ammonium chloride and precipitate of barium sulphate.
7. Potassium metal reacts with water give potassium hydroxide and hydrogen gas.
8. Calcium hydroxide + carbon dioxide → calcium carbonate + water
9. Zinc + silver nitrate → zinc nitrate + silver
10. Potassium bromide + barium iodide → potassium iodide + barium bromide
11. Sodium carbonate on reaction with hydrochloric acid gives sodium chloride and sodium hydrogen carbonate.
12. Copper sulphate on treatment with potassium iodide precipitates cuprous iodide, liberates iodine gas and also forms potassium sulphate.
13. Note down expt. No. 1. 2.1, 2.2, 4 in the lab manual. (Except theory and procedure).

## Biology

1. Why is diffusion insufficient to meet the oxygen requirements of multi cellular organisms like humans?
2. What are the different ways in which glucose is oxidized to provide energy in various organisms?
3. Chloroplasts are called as energy convertors, why?
4. What are the necessary conditions for autotrophic nutrition and what are its byproducts?
5. What is the effect of light and temperature on photosynthesis?
6. List the three events that occur during the process of photosynthesis. Explain the role of stomata in this process
7. Describe an experiment to show that “Sunlight is essential for photosynthesis”.
8. State the basic difference between the process of respiration and photosynthesis.

9. Draw the internal structure of chloroplast and label it.
10. State the differences between light reaction and dark reaction.
11. Note down expt. No. 13,14,15.1 and 15.2 in the lab manual. (Except theory and procedure).

**SOCIAL SCIENCE: -**

**General Instructions**
*Complete all work in a neat separate notebook/file.
*Use blue/black pen for writing and pencil for maps/diagrams.
*Maintain proper headings, dates, and page numbers.
*Draw maps and diagrams neatly with proper labelling.
*Use creative presentation methods such as charts, collage, flowcharts, mind maps, and newspaper cuttings.
*Avoid copying directly from the internet or guidebooks.
*Submit the homework on the first working day after vacations.
Holiday homework will be assessed as part of Internal *Assessment.

**Subject-wise Holiday Homework**

**HISTORY Activity 1: Prepare a handwritten project (8–10 pages) on any one topic: *(for even roll numbers)***
*The French Revolution. *The Rise of Nationalism in Europe. *Print Culture and the Modern World. *Nationalism in India
**Include**: Introduction,Important dates/events,Causes and effects,Pictures/maps,Timeline,Conclusion,Bibliography
**Activity 2: Timeline Work-** Make a colourful timeline showing important events from:"**The Rise of Nationalism in Europe" (**Include at least 10 events with dates and pictures.) ***(for odd roll numbers)***

**GEOGRAPHY**
**Activity 1: Sustainable Development Poster**
**Prepare a poster on: *(for even roll numbers)***
"Save Environment, Save Future" Use slogans, drawings, and creative ideas.
**Activity 2: Case Study.** Write a short case study on:
"How can we conserve water at home and school?" ***(for odd roll numbers)***

**POLITICAL SCIENCE (CIVICS)**
**Activity 1: Democratic Awareness*(for even roll numbers)***
Prepare a chart on: **"Features of Democracy"**
**Include:** Meaning,Features**,**Merits**,**Challenges
**Activity 2: Creative Work*(for odd roll numbers)***
Make a mind map on:**"Political Parties in India"**
**Include:**Nationalparties**,**Regionalparties**,**Functions**,** Challenges

**ECONOMICS**
**Activity 1: Consumer Awareness**
Prepare a colourful pamphlet on**:"Consumer Rights and Responsibilities"**
**Include:**Consumerrights**,**Consumerresponsibilities**,**Consumer helpline number**,**ISI,AGMARK, Hallmark logos***(for even roll numbers)*

**Activity 2: FAMILY MONTHLY BUDGET ACTIVITY**
Prepare a budget of your family by collecting information about the daily expenditure on basic needs under the following headings:**Food,Education,Transport,Electricity,Savings,Others (**After collecting the daily expenses, convert them into a monthly budget for 30 days ) ***(for odd roll numbers)***

## ARTIFICIAL INTELLIGENCE:-

1. Your school wants to build an AI system to predict students' exam scores. Prepare a complete AI Project Cycle for this idea — from Problem Scoping to Deployment.
2. Build an AI solution to help farmers predict crop diseases. Interviewing farmers to understand the problem and prepare 4w canvas and problem statement template. Then collect images of diseased and healthy crops. Then clean the data, chose a computer vision model, trained it, and tested it on new images. Download the trained model, save it on google drive and share its link to your subject Teacher.
3. Prepare an AI chatbot for mental health support. Save it on google drive and share its link to your subject Teacher.
4. "Smartphones have become an important part of our daily lives. Research and explain how smartphones collect user data and how this may affect our privacy. Also suggest some ways to protect personal information while using smartphones."

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