



# **S.B.P. D.A.V. Centenary Public School, Fatehabad.**

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**Holidays' Assignments for Summer Vacations (2025-26) for Class X**



## **General Instructions:**

1. *Get up early in the morning and go out for a walk daily. Do yoga daily for healthy living.*
2. *Make a Bird feeder and add seeds for birds daily and also place water for them.*
3. *Raise a small kitchen garden by planting seeds.*
4. *Learn any one folk song.*
5. *Help your mother in cooking and learn vegetable cooking and salad decoration.*
6. *The summer break for classes VI-XII will be from 01.06.2025 to 01.07.2025 (Both days inclusive). School will reopen on 02.07.2025.*
7. *Revise the syllabus of all subjects done before summer vacations for Unit Tests to be started from 07.07.2025.*
8. *Try to make your handwriting better by practicing and do your HW in good handwriting.*
9. *Do assignments in holidays homework notebook and activities/projects on A4 sheets for each subject & submit it for assessment to your class teacher on July 10, 2025.*
10. *Learn all the prayers and mantras given in student diary.*
11. ***Register & participate in 1<sup>st</sup> stage of 11<sup>th</sup> Online International Humanity Olympiad, International Open Oratory Contest and International Open Poetry Recitation Contest by accessing through web portal <https://www.dhyankaksh.org/value-your-virtues>. Every individual passing the exam (i.e. scoring minimum 40%) will get an e-certificate through e-mail immediately on their e-mails. School code is : FATE104. This certificate and certificates of courses earned by you during holidays should be part of your portfolio.***
12. ***Waste Warriors: Smart Sorting & Creative Recycling.** Survey at least 10 families in your surroundings and collect data how they Dispose off two types of waste and create awareness in them to segregate waste. Click pictures and paste in your portfolio.*

## **ENGLISH**

### **Syllabus for UT**

**First Flight: Ch. 1,2**

**Poems: Dust of snow, Fire and Ice, The tiger in the zoo**

**Footprints without feet: Ch.1,2**

**Grammar: Tenses, Subject verb concord**

**BBC Task:**

1. Do Comprehension exercises from pages 3 to 18 of bbc : Worksheet 1 to 5

2. Read sample of letters to editor given in bbc and write letters given on pages 117 to 126.
3. Revise the usage of tenses given on pages 242 to 247. Do exercises using correct form of verbs given on pages 248-253.
4. Read the chapter 1 and 2 of First flight and chapter 1&2 of Footprints Without Feet again and do extract in bbc.

## **5. Project Work**

### **A. Project title : Heritage Album - India's Treasure**

How to do :

1. Select 4-5 Heritage sites.  
eg. Taj Mahal, Qutub Minar, Red Fort, Hampi
2. Collect pictures
3. Paste pictures in a scrap file/ diary/notebook : make different sections, decorate the pictures
4. Write short description about location, historical importance, special features

### **B . Do the following project in your project file**

#### **Moral Lessons Poster Series:**

Create visual posters that each showcase the moral/message of any three different stories and poems which you have read in your English books

Examples:

Honesty Brings Changes (The Thief's Story)

Cleverness surpass Overconfidence (The Midnight Visitor)

Kindness toward animals (A Triumph of Surgery)

### **7. Read any one of the following books and prepare a book review.**

- a) Animal Farm by George Well
- b) The Canterville Ghost by Oscar Wilde
- c) Wings of Fire by Dr APJ Abdul Kalam

#### **Book Review Format**

##### **1. Basic Information**

Title:

Author:

Genre: (e.g., Fiction, Non-fiction, Mystery, Biography, Fantasy, etc.)

Publisher & Year:

Pages:

## 2. Introduction

Brief overview of the book's subject or premise.

Why did you choose to read this book?

Set the tone for your review (informal/formal, personal/analytical).

## 3. Summary of the Plot

A concise outline of the main storyline or themes.

Introduce the main characters or key ideas.

Avoid major plot twists or spoilers

## 4. Analysis / Evaluation

Writing Style: How is the author's writing? Is it descriptive, concise, poetic, etc.?

Character Development: Are the characters believable, relatable, dynamic?

Themes: What major ideas or messages are explored?

Pacing & Structure: Is the book engaging, slow, well-organized?

Originality: How unique is the story or perspective?

## 5. Your Personal Response

What did you like or dislike most about the book?

Did it meet your expectations?

How did it make you feel?

Would you recommend it? Why or why not?

## 6. Favorite Quotes or Passages

Share 1-2 memorable lines and explain why they stood out.

## हिन्दी

1. अपने पाठ्यक्रम से संबंधित अलंकारों( उपमा, रूपक, उत्प्रेक्षा, अतिशयोक्ति एवं मानवीकरण) की परिभाषा देते हुए अपनी ओर से प्रत्येक अलंकार के पाँच-पाँच स्वरचित उदाहरण लिखें एवं उनका स्पष्टीकरण भी करें। (व्याकरण की कार्य पुस्तिका में करें)

2. निम्नलिखित विषयों पर लगभग 150 शब्दों में अनुच्छेद लिखें - (व्याकरण की कार्य पुस्तिका में करें)

\* पर्यावरण संरक्षण : आज के समय में प्रत्येक नागरिक की जिम्मेवारी

\* आतंकवाद : राष्ट्र हित में बाधक

3. विज्ञान के क्षेत्र में आधुनिक साधनों का उपयोग दिन प्रतिदिन बढ़ता जा रहा है इनके उपयोग के यदि एक ओर सकारात्मक प्रभाव हैं तो दूसरी ओर नकारात्मक प्रभाव भी हैं आप अपनी ओर से किन्ही पाँच आधुनिकतम साधनों

का वर्णन कीजिए और एक तरफ उनके सकारात्मक पहलुओं पर चर्चा करें तो दूसरी तरफ उनके नकारात्मक पहलुओं का वर्णन चित्र सहित करें। (A4 Sheet पर करें)

4. निम्नलिखित विषयों पर लगभग 50 शब्दों में विज्ञापन तैयार करें -

5. मतदान प्रत्येक नागरिक का अधिकार और कर्तव्य है। मुख्य चुनाव आयुक्त की ओर से इस विषय पर 40 शब्दों का एक विज्ञापन तैयार कीजिए । (A4 Sheet पर करें)

6. स्वास्थ्य मंत्रालय की ओर से रक्तदान हेतु जागरूकता फैलाने के लिए लगभग 40 शब्दों में एक आकर्षक विज्ञापन तैयार कीजिए । (A4 Sheet पर करें)

7. आप अपने छोटे भाई को जन्मदिन की शुभकामना देते हुए एक संदेश लगभग 40 से 50 शब्दों में लिखिए।

8. व्यक्ति के जीवन में योग के महत्व को दर्शाते हुए अंतर्राष्ट्रीय योग दिवस के उपलक्ष्य में राज्य के मुख्यमंत्री की ओर से जनहित में जारी एक संदेश लगभग 40 से 50 शब्दों में लिखें। (व्याकरण की कार्य पुस्तिका में करें)

9. अपनी ओर से कोई भी एक अनौपचारिक पत्र एवं एक औपचारिक पत्र लिखें । (व्याकरण की कार्य पुस्तिका में करें)

10. हिंदी हमारे देश की मातृभाषा है । हिंदी भाषा का उद्भव और विकास कहाँ से हुआ ? हिंदी भारत के कौन-कौन से राज्यों में बोली जाती है ? हिंदी भाषा का प्रयोग मीडिया के क्षेत्र में कहाँ तक महत्वपूर्ण है ? किसी भी देश की उन्नति के लिए वहाँ रहने वाले लोगों को अपनी मातृभाषा से परिचित होना आवश्यक है , इस बात से आप कहाँ तक सहमत हैं ? आप अपने आसपास रहने वाले किन्हीं पाँच लोगों से विचार साँझा करें व इनका उल्लेख करते हुए एक परियोजना कार्य संबंधी फाइल तैयार करें।

पहला पृष्ठ- विद्यार्थी का नाम, कक्षा, वर्ग, अनुक्रमांक, विद्यालय का नाम एवं विद्यालय का प्रतीक चिह्न (लोगो)

दूसरा पृष्ठ-आभार ज्ञापन तीसरा पृष्ठ- अनुक्रमणिका (Index) चौथा पृष्ठ- भूमिका/प्रस्तावना

पाँचवा पृष्ठ - संपूर्ण वर्णन

\* प्रथम इकाई परीक्षा संबंधी पाठ्यक्रम का दोहराई कार्य पूरा करें।

\* क्षितिज गद्य खंड पाठ- नेताजी का चश्मा , बालगोबिन भगत

\* काव्य खंड पाठ- सूरदास के पद, राम लक्ष्मण परशुराम संवाद

\* व्याकरण- रचना के आधार पर वाक्य भेद , पत्र लेखन ।

वाक्य पर आधारित प्रश्न

1. अस्वस्थ होने के कारण यह नहीं जा सका। (संयुक्त वाक्य)

2. शशि गा रही है जीर नाच रही है। (सरत वाक्य)

3. कम रोशनी में पढ़ने के कारण विद्यार्थी अपनी आँखें गँवा बैठा। (मिश्र वाक्य)

4. तुम वहीं चले जाओ, जहाँ गाड़ी रुकती है। (सरल वाक्य)
5. अपराधी होने के कारण उसे सजा मिली। (मिश्रित वाक्य)
6. दो नदियों के मिलने के स्थान को संगम कहते हैं। (मिश्रित वाक्य)
7. मैं घर पहुँचा, तब मैंने देर तक उसके साथ बातचीत की। (सरल वाक्य)
8. देश के लिए मर मिटने वाला व्यक्ति ही सच्चा देशभक्त होता है। (संयुक्त वाक्य)
9. किवाड़ खुलने की आवाज़ सुनकर बुद्धन चौंका। (मिश्र वाक्य)
10. टोपी बाला बाबू कहाँ गया। (मिश्र वाक्य)

निम्नलिखित वाक्यों में आश्रित उपवाक्य छाँटिए और उसका भेद लिखिए।

1. गाँधी जी ने कहा कि सदा सत्य बोलो।
2. यह वही व्यक्ति है जिसकी कल पिटाई की गई थी।
3. रोशन जो मुरलीपुरा में रहता है, मेरा मित्र है।
4. यदि तुम मेहनत करोगे, तो सफलता मिलेगी।
5. जब सूरज उगता है तब अँधेरा दूर हो जाता है।
6. जैसे ही अलार्म बजा वैसे ही वह उठ बैठा।
7. जहाँ साफ़-सफ़ाई होती है वहाँ ईश्वर का वास होता है।
8. जब मैं जागता हूँ, तब टहलने जाता हूँ।
9. ज्यों ही वर्षा शुरू हुई मोर नाचने लगे।

### वाच्य पर आधारित प्रश्न

1. मुझसे यह काम नहीं हो सकता। (कर्तृवाच्य में)
2. अध्यापक ने हमें आज नया पाठ पढ़ाया। (कर्मवाच्य में)
3. मैं बैठ नहीं सकता। (भाववाच्य में)
4. मैं यह भाषा नहीं पढ़ा सकूँगा। (कर्मवाच्य में)
5. उसके द्वारा हमें मूर्ख समझा जाता है। (कर्तृवाच्य में)
6. रोगी से दवाई नहीं खाई जा रही है। (कर्तृवाच्य में)
7. बच्चे खेलेंगे। (भाववाच्य में)
8. माँ ने पुत्र को सुला दिया। (कर्मवाच्य में)
9. रातभर कैसे जागा जाएगा? (कर्तृवाच्य में)
10. हमने नहीं गाया। (भाववाच्य में)

नोट - वाक्य एवं वाच्य पर आधारित प्रश्नों के उत्तर अपनी व्याकरण की कार्यपुस्तिका में लिखें ।

### MATHS

- HCF of (a, b) = 12 and  $a \times b = 1800$  then LCM of (a, b) is :  
[a] 3600      [b] 900.      [c] 150.      [d] 90
- The LCM of two numbers is 15 times their HCF. The sum of LCM and HCF is 224. If one of the number is 42 then other number is :  
[a] 84      [b] 70      [c] 56      [d] 80
- The LCM of two numbers is 30 times their HCF. The sum of LCM and HCF is 279. If one of the number is 54 then other number is :  
[a] 45      [b] 54      [c] 27      [d] 90
- Determine the value of  $(q+p)^2$  so that prime factorization of 1680 is expressible as  $2^p \times 3^q \times s \times 7$   
[a] 144      [b] 100      [c] 441      [d] 400
- The largest number which divides 62 and 83, leaving remainders 2 and 8, respectively, is  
[a] 13      [b] 65      [c] 15      [d] 1750
- If S is the sum of zeroes of  $2x^2 + 18x - 24$  and P is the product of zeroes of  $3x^2 - 23x + 30$  then the value of (S+P) .  
[a] 1      [b] -19      [c] 19      [d] -1
- If p and q are the zeroes of the polynomial  $5x^2 + 40x + 7$  then the value of  $(p + q + 15pq)$   
[a] -42      [b] -29      [c] 29      [d] 13
- If sum of zeroes of the polynomial  $3kx^2 - (9k-4)x + 9$  is  $1/3$  then the value of k.  
[a]  $1/4$       [b]  $1/2$       [c]  $-1/3$       [d] -2
- If product of zeroes of the polynomial  $15kx^2 - 16x + (6k + 13)$  is 3 then the value of k.  
[a]  $-1/2$       [b]  $1/3$       [c]  $1/2$       [d] -5
- The sum of the zeroes of the polynomial  $(3k-4)x^2 - 8x + (k+6)$  is equal to their product then the value of k is:  
[a] 3      [b] -3      [c]  $-5/2$       [d] 2
- If  $x = -3/7$  and  $28x + 9y = 15$ , then the value of 6y is equal to :  
[a] -24      [b] 18      [c] -20      [d] 15
- The pair of equations  $21x + 18y = 2$  and  $28x + 24y = -9$  has :  
[a] one solution      [b] two solutions      [c] many solutions      [d] no solution

13. The pair of linear equations  $2kx + 15y = 9$ ,  $8x + 20y = 12$  has a unique solution, then  
 [a]  $k \neq -3$       [b]  $k \neq 3$       [c]  $k = -2$       [d]  $k \neq 1/4$
14. The given number is 8 more than 8 times the sum of the digits, when digit at one's Place is  $x$  and digit at ten's place is  $y$ , then which one is true  
 [a]  $7x + 9y = -8$     [b]  $8 = 7x - 9y$       [c]  $0 = 7x - 2y + 8$     [d]  $7x + 2y = 8$
15. If the length of rectangle is reduced by 6 cm and breadth is increased by 10cm then it becomes a square, then which is true :  
 [a]  $L + B + 16 = 0$     [b]  $L - 2B - 16 = 0$     [c]  $L - B - 16 = 0$       [d]  $L - B - 6 = 0$
16. If 6 is added in the numerator and 7 in the denominator the fraction becomes  $3/5$ . Find the equation in two variables by taking numerator as  $x$  and denominator as  $y$  which satisfy the given condition :  
 [a]  $5x - 3y = -9$     [b]  $5y - 3x = 13$       [c]  $5x - 3y = 9$       [d]  $5y - 3x = 9$
17. Find the value of  $k$  if the given equation  $2x^2 - 4x + (3k - 4) = 0$  has equal roots.  
 [a]  $-2$       [b]  $5$       [c]  $-5$       [d]  $2$
18. The discriminant of  $\sqrt{5}x^2 + 2\sqrt{7}mx + 2\sqrt{5}m = 0$   
 [a]  $28m^2 + 40m$     [b]  $28m^2 - 40m$       [c]  $28m^2 - 45m$       [d]  $40m - 25m^2$
19. If  $x(x + 13) = 30$ , then positive value(s) of  $x$  is  
 [a]  $2, 15$       [b]  $15, 1$       [c]  $2$       [d]  $15$
20. The integral value of  $x$  which satisfy the equation :  $3x(x - 3) = 5 + 5x$   
 [a]  $-3$       [b]  $-2$       [c]  $5$       [d]  $2$
21. In an Arithmetic Progression, if  $a = 28$ ,  $d = -4$ ,  $n = 7$ , then  $a_n$  is :  
 [a]  $5$       [b]  $7$       [c]  $4$       [d]  $3$
22. 30th term of the A.P:  $10, 7, 4, \dots$ , is:  
 [a]  $97$       [b]  $77$       [c]  $-77$       [d]  $-87$
23. Sum of  $p$  terms of an A.P. is  $q$  and sum of  $q$  terms is  $p$ , then sum of  $p$  and  $q$  terms will be :  
 [a]  $0$       [b]  $p - q$       [c]  $p + q$       [d]  $-(p + q)$
24. The value of  $p$  for which  $(2p + 1)$ ,  $10$  and  $(5p + 5)$  are three consecutive terms of an A.P. :  
 [a]  $-1$       [b]  $-2$       [c]  $1$       [d]  $2$
25. If  $n$ th term of an A.P. is  $(2n + 1)$ , then the sum of first  $n$  terms of the A.P. is  
 [a]  $n(n - 2)$     [b]  $n(n + 2)$       [c]  $n(n + 1)$       [d]  $n(n - 1)$
26. Find the largest number that will divide  $445$ ,  $572$  and  $699$  leaving remainder  $4$ ,  $5$  and  $6$  respectively. [63]

27. In a seminar the number of participants in Hindi, English and Mathematics are 60, 84 and 108 respectively. Find the minimum number of rooms required if in each room same number of participants are to be seated and all of them being in same subject. [21]
28. Show that : (i)  $\sqrt{2}$  is an irrational number (ii)  $\frac{1}{\sqrt{5}}$  is an irrational number .
29. Find the zeroes of the polynomial  $3x^2 - 7x + 4$  . Verify the relationship between zeroes and co-efficient.
30. If sum of zeroes of  $x^2 + (3m+7)x + (5m+6)$  is one-fourth of its product of zeroes. Find m. [-2]
31. Solve for x and y :  $cx + dy = d^2 + cd$ ,  $dx + cy = cd + d^2$  [d,d]
32. Teesha travels 550 km to his home, partly by train and partly by bus. She takes 12 hours if she travels 200 km by train and rest by bus. She takes 24 minutes more if she travels 280 km by train and the rest by bus. Find the speed of the train and car. [40,50]
33. If the given equations :  $3x + 4y = 10$ ,  $(p+q+2)x + (p+2q+4)y = 40$  have many solutions, find p and q. [8,2]
34. Two brands of chocolates are available in packs of 24 and 15 respectively. If I need to buy an equal number of chocolates of both kinds, what least number of boxes of each kind I would need to buy ? [8 and 5]
35. Solve for x and y :  $x/a + y/b = a^2 + b^2$ ,  $x/a^2 + y/b^2 = a + b$   $[(a^3, b^3)]$
36. If the length of the rectangle is increased by 5m and width by 2m, the area increased by 160 square meter. If length is increased by 20m and width reduced by 5m, then length becomes 3 times the width, find the sides of the rect. [25,20]
37. Points A and B are 300 km apart on a highway. A car starts from A and another car starts from B at the same time. If they travel in the same direction, they meet in 30 hrs., but if they travel towards each other, they meet in 2 hours. What are their speeds? [80,70]
38. **Statement A (Assertion):** H.C.F. and L.C.M. of two numbers are 25 and 815 respectively.  
**Statement R( Reason) :** L.C.M. of two natural numbers is always divisible by their H.C.F.
- (a) Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A)  
 (b) Both assertion (A) and reason (R) are true and reason (R) is not the correct explanation of assertion (A)  
 (c) Assertion (A) is true but reason (R) is false.  
 (d) Assertion (A) is false but reason (R) is true.
39. **Statement A (Assertion) :**  $\sqrt{5}$  is an irrational number  
**Statement R( Reason) :** Square root of a positive integer which is not a perfect square is an irrational number.
- (a) Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A)

- (b) Both assertion (A) and reason (R) are true and reason (R) is not the correct explanation of assertion (A)
- (c) Assertion (A) is true but reason (R) is false.
- (d) Assertion (A) is false but reason (R) is true.

**40. Statement A (Assertion) :** The linear equations  $2x + 3y = 6$  and  $4x + 6y = 5$  are parallel.

**Statement R( Reason) :** If  $\frac{a_1}{a_2} = \frac{b_1}{b_2} \neq \frac{c_1}{c_2}$  then lines are parallel.

- (a) Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A)
- (b) Both assertion (A) and reason (R) are true and reason (R) is not the correct explanation of assertion (A)
- (c) Assertion (A) is true but reason (R) is false.
- (d) Assertion (A) is false but reason (R) is true.

### Competency Based Questions

Applications of Parabola : Suspension Bridge if the roadway of a suspension bridge is loaded uniformly per

horizontal metre, the suspension cable hangs in the form of arcs which closely approximate to parabolic arcs.

Therefore, parabolic arcs are used in suspension cable bridge construction.

**1. Parabola :** A parabola is the graph that results from  $p(x) = ax^2 + bx + c$ ,  $a \neq 0$ . Parabolas are symmetric about

a vertical line known as the Axis of Symmetry.

[i]



Find the

quadratic polynomial whose zeroes are -5 and 4.

- [a]  $x^2 + x - 20$     [b]  $x^2 - x - 20$       [c]  $x^2 + x + 20$     [d]  $x^2 - x + 20$ .

[ii] Find the sum and product of zeroes of quadratic polynomial :  $4x^2 + 12x - 5$  are:

- [a] 3, -5/4      [b] -3, 5/4      [c] -3, -5/4      [d] 3, 5/4

[iii] The number of zeroes of  $4x^2 - 8x$  .

- [a] 0      [b] 1      [c] 2      [d] 3

[iv] If the suspension cable of a bridge hangs in the form of an arc is represented by  $3x^2-10x+3$ , then its zeroes are

- [a] -3, 1/3                      [b] 3, 1/3                      [c] -3, -1/3                      [d] 3, -1/3

[v] Graph of a quadratic polynomial is a :

- [a] straight line                      [b] hyperbola                      [c] ellipse                      [d] parabola

2. A seminar is being conducted by an Educational Organisation , where the participants will be educators of

different subjects . The number of participants in Hindi ,English and Mathematics are 60 , 84 and 108 respectively . Now answer the following questions.

(I) In each room the same number of participants are to be seated and all of them being in the same subjects . , hence maximum number of participants that can be accommodated in each room are :

- [a] 14                      [b] 12                      [c] 16                      [d] 18 .

(II ) What is the minimum number of rooms required during the event ?

- [a] 11                      [b] 31                      [c] 41                      [d] 21 .

(III) L.C.M. of 60 , 84 and 108 is :

- [a] 3780                      [b] 3680                      [c] 4780                      [d] 4680.

(IV) 108 can be expressed as products of its primes as :

- [a]  $2^3 \times 3^2$                       [b]  $2^3 \times 3^3$                       [c]  $2^2 \times 3^2$                       [d]  $2^2 \times 3^3$  .

3. Auditorium, the part of a public building where an audience sits, as distinct from the stage, the area on which the performance or other object of the audience's attention is presented. In a large theatre an auditorium includes a number of floor levels frequently designed as stalls, private boxes, dress circle, balcony or upper circle, and gallery. A sloping floor allows the seats to be arranged to give a clear view of the stage. The walls and ceiling usually contain concealed light and sound equipment and air extracts or inlets and may be highly decorated. In an auditorium, seats are arranged according to the requirement of the audience, on one day if 5 members are less in a row there are 4 more rows required and if there are 9 persons more in each row there would be 3 rows less.



(i) Describes the algebraic equations of above situations ?

(ii) Find the total number of seats in the Auditorium.

4. Your elder brother wants to buy a car and plans to take loan from a bank for his car. He repays his total loan of Rs 1,18,000 by paying every month starting with the first installment of Rs 1000. If he increases the installment by Rs 100 every month, answer the following:



(I) The amount paid by him in 30th installment .

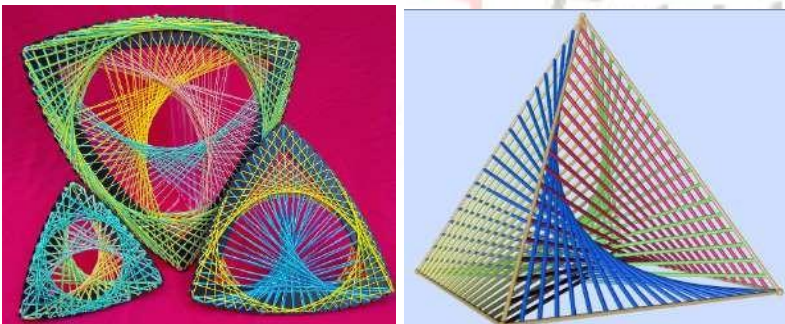
(II) The amount paid by him in the 30 installments .

(III) If total installments are 40 then amount paid in the last installment?

(IV) The ratio of the 1st installment to the last installment is

**Activity :1.** Prepare any 2 mathematical shapes using string art and elaborate the mathematical concept involved in it on an A3 Sheet.

**Examples for reference:** <https://www.youtube.com/watch?v=yhZJfaQB9k0>



2. Make four statements from your surroundings related to linear equation in two variables and also solve them.

**Syllabus for Unit Test:**

- Chapter 1, 2 and 3

## SCIENCE

### Prepare these Chapters for UT:

- (1) Light: Reflection and refraction
- (2) Chemical Reactions and Equations
- (3) Life Processes

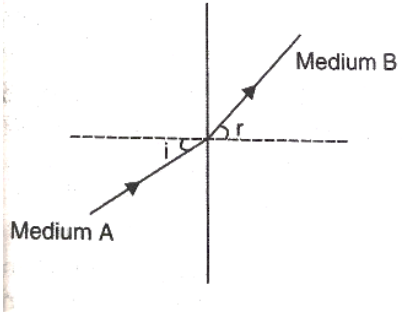
### Physics:

<b>NCERT</b>	Solve All problems of Chapter Light: Reflection and Refraction from NCERT and NCERT exemplar in Fair Notebook.
<b>Innovative Idea:</b>	<p>One Innovative idea Per Student Must be Submitted.</p> <p>How to Find the Idea?</p> <p>There are many problems around us which we face on daily basis. Look for these routine problems around us. Think of how science can be helpful in solving such problems. Use this link to see examples for better understanding of the task.</p> <p><a href="https://inspireawards-dst.gov.in/download/booklet/English-Booklet-2020.pdf">https://inspireawards-dst.gov.in/download/booklet/English-Booklet-2020.pdf</a></p> <p>Make one chart of your idea. You will be given 2 min to present your ideas in Class after summer break.</p>
<b>Activity:</b>	Observe refraction of light at your home. Click pictures of the phenomenon and print picture and paste in your portfolio file.
<b>WORKSHEET:</b>	Solve All question of Physics worksheet provided below in Holiday Homework Notebook.

### Physics Worksheet

#### Multiple Choice Questions(MCQ)

Q1.	A concave mirror of focal length 10 cm is dipped in water. The focal length of the concave mirror in water is: (a) >10cm      (b) < 10cm      (c) 10 cm      (d) cannot predict
-----	--

<p>Q2.</p>	<p>A light ray enters from medium A to medium B as shown in figure. The refractive index of medium B relative to A will be</p> <p>(a) greater than unity (b) less than unity (c) equal to unity (d) zero</p>	
<p>Q3.</p>	<p>A child is standing in front of a magic mirror . she finds the image of her head bigger, the middle portion of her head bigger, the middle portion of her body of the same size and that of legs smaller. The following is the order of combinations for the magic mirror from the top.</p> <p>(a) Plane, convex and concave (b) Convex, concave and plane (c) Concave, plane and convex (d) Convex, plane and concave</p>	
<p>Q4.</p>	<p>A glass slab of refractive index 1.5 has a thickness of 3 cm. If light enters normally, the lateral shift produced by the slab is:</p> <p>(a) 0 cm            (b) 1 cm            (c) 2 cm            (d) 3 cm</p>	
<p>Q5.</p>	<p>A converging lens has a focal length of 20 cm. An object is placed 15 cm from the lens. The nature of the image formed is:</p> <p>(a) Virtual, erect, and magnified (b) Real, inverted, and magnified (c) Real, inverted, and diminished (d) Virtual, erect, and diminished</p>	
<p>Q6.</p>	<p>In order to obtain a magnification of, <math>-1.5</math> with a concave mirror of focal length 16 cm, the object will have to be placed at a distance:</p> <p>(a) between 6 cm and 16 cm    (b) between 32 cm and 16 cm (c) between 48 cm and 32 cm    (d) beyond 64 cm</p>	
<p>Q7.</p>	<p>What happens to the focal length of a lens when it is immersed in water?</p> <p>(a) The focal length remains unchanged. (b) The focal length increases. (c) The focal length decreases. (d) The lens stops functioning as a lens.</p>	
<p>Q8.</p>	<p>A lens has a power of <math>-2.5</math> D. When combined with another lens, the system becomes</p>	

	equivalent to a plane glass slab. What is the power of the second lens? (a) +2.5 D                      (b) -2.5 D                      (c) +5 D                      (d) 0 D
Q9.	A student uses a lens with a power of +5 D to focus sunlight. What is the distance between the lens and the focused image? (a) 5 m                      (b) 0.5 m                      (c) 2 m                      (d) 10 cm
Q10.	Velocity of light in vacuum is $3 \times 10^8$ m/s and the refractive index of glass is 1.5. The time taken by light in travelling 3 km in glass will be: (a) $1.5 \times 10^{-5}$ s                      (b) $1.5 \times 10^{-6}$ s (c) $1.5 \times 10^{-7}$ s                      (d) $1.5 \times 10^{-4}$ s

### Assertion – Reason Questions

DIRECTIONS: In each of the questions given below, there are two statements marked as Assertion (A) and Reason (R). Mark your answer as per the codes provided below:

- (a) Both A and R are true and R is the correct explanation of A.
- (b) Both A and R are true but R is not the correct explanation of A.
- (c) A is true but R is false.
- (d) A is false but R is true.

Q1.	<b>Assertion(A):</b> Concave mirror is used by doctors to examine throat, ear , nose , teeth etc. <b>Reason(R):</b> Concave mirror forms both magnified and diminished images.
Q2.	<b>Assertion(A):</b> With the increase in thickness of the glass slab, the lateral displacement increases. <b>Reason(R):</b> The speed of light increases when it enters from rarer medium to denser medium.
Q3.	<b>Assertion(A):</b> The magnification of a convex lens is always positive. <b>Reason(R):</b> The convex lens forms both real and virtual images.
Q4.	<b>Assertion(A):</b> The power of concave lens is said to be negative. <b>Reason(R):</b> A concave lens has a negative focal length.
Q5.	<b>Assertion(A):</b> Higher is the refractive index of a medium or the denser the medium, lesser is the velocity of light in that medium. <b>Reason(R):</b> Refractive index is inversely proportional to the velocity.
Q6.	<b>Assertion(A):</b> A concave mirror is used as a shaving mirror.

	<b>Reason(R):</b> Concave mirrors can form magnified, upright images when the object is placed between the pole and the focus.
Q7.	<b>Assertion(A):</b> For observing traffic at back, the driver mirror is convex mirror. <b>Reason(R):</b> A convex mirror has much larger field of view than a plane mirror.
Q8.	<b>Assertion(A):</b> A convex mirror can not form real images. <b>Reason(R):</b> Convex mirror converges the parallel rays that are incident on it.
Q9.	<b>Assertion(A):</b> A Concave mirror can form both real and virtual images. <b>Reason(R):</b> The nature of the image formed by a concave mirror depends on the object's position relative to the focus.
Q10.	<b>Assertion(A):</b> A plane mirror always forms a virtual and erect image. <b>Reason(R):</b> The reflection in a plane mirror occurs due to regular reflection.

### Biology:

<b>NCERT</b>	Solve All problems of Chapter Life Processes from NCERT and NCERT exemplar in Fair Notebook.
<b>Research Work:</b>	Prepare a research report in power point format about “How did the atomic bombings of Hiroshima and Nagasaki affect the environment and human health, and what biological damage was caused by radiation exposure at the molecular, cellular, and systemic levels”?
<b>WORKSHEET:</b>	Solve (with proper reason) All question of worksheet provided below in Holiday Homework Notebook.

### Biology worksheet

- Assertion (A):** Photosynthesis does not occur in red light as efficiently as in blue light.  
**Reason (R):** Chlorophyll absorbs blue light more effectively than red light.
- Assertion (A):** The inner surface of the small intestine has finger-like projections called villi.  
**Reason (R):** Villi help in the mechanical breakdown of food in the small intestine.
- Assertion (A):** Insectivorous plants are autotrophic.  
**Reason (R):** They obtain all their nutrients from insects.

4. **Assertion (A):** Enzymes are essential for the digestion of food.  
**Reason (R):** Enzymes help in the physical breakdown of large food particles.
5. **Assertion (A):** Bile juice emulsifies fats to aid in digestion.  
**Reason (R):** Bile contains enzymes that directly digest fats.
6. **Assertion (A):** Saliva plays an important role in carbohydrate digestion.  
**Reason (R):** Saliva contains lipase which digests starch into glucose.
7. **Assertion (A):** Protein digestion begins in the stomach.  
**Reason (R):** The acidic pH of the stomach denatures proteins, preparing them for enzymatic digestion.
8. **Assertion (A):** Photosynthesis requires carbon dioxide and water in the presence of light.  
**Reason (R):** Chlorophyll captures solar energy and splits carbon dioxide.
9. **Assertion (A):** Heterotrophic organisms depend directly or indirectly on autotrophs.  
**Reason (R):** Autotrophs are the only organisms that can fix atmospheric carbon dioxide.
10. **Assertion (A):** Amoeba engulfs food by phagocytosis.  
**Reason (R):** Amoeba has a mouth-like structure for ingestion.
11. **Assertion (A):** In anaerobic respiration, glucose is not completely broken down.  
**Reason (R):** Anaerobic respiration produces more ATP than aerobic respiration.
12. **Assertion (A):** Mitochondria are known as the powerhouses of the cell.  
**Reason (R):** Mitochondria are the sites of anaerobic respiration.
13. **Assertion (A):** Oxygen is essential for aerobic respiration.  
**Reason (R):** Oxygen acts as the final electron acceptor in the electron transport chain.
14. **Assertion (A):** Breathing and respiration are the same biological processes.  
**Reason (R):** Both involve the exchange of gases in the alveoli.
15. **Assertion (A):** ATP is known as the energy currency of the cell.  
**Reason (R):** ATP stores and transports energy within the cell for various activities.
16. **Assertion (A):** During heavy exercise, muscles may switch to anaerobic respiration.  
**Reason (R):** Anaerobic respiration in muscles produces lactic acid and less energy.
17. **Assertion (A):** The rate of breathing increases during physical activity.  
**Reason (R):** To compensate for increased oxygen demand and removal of carbon dioxide.
18. **Assertion (A):** Yeast respire anaerobically to produce alcohol.  
**Reason (R):** Anaerobic respiration in yeast converts glucose into ethanol and CO<sub>2</sub>.

19. **Assertion (A):** Carbon dioxide is a waste product of aerobic respiration.

**Reason (R):** Carbon dioxide is produced during glycolysis in the cytoplasm.

20. **Assertion (A):** The lungs have a large surface area for gas exchange.

**Reason (R):** Alveoli in the lungs are richly supplied with blood vessels.

### Chemistry:

<b>NCERT</b>	Solve All problems of Chapter Chemical Reactions and Equations from NCERT and NCERT exemplar in Fair Notebook.
<b>GLOSSARY OF CHEMISTRY:</b>	To inculcate scientific temperament and for understanding the conceptual knowledge of chemistry, students have to prepare a GLOSSARY OF CHEMISTRY. Add relevant pictures, diagrams and related to these discoveries. Use A-4 size sheets and write in neat handwriting. Glossary must comprise of 10 Chemistry terms (with their definitions) of each alphabet including Laws, formulas, principles and micro scale chemistry apparatus.
<b>WORKSHEET:</b>	Solve (with proper reason) All question of worksheet provided below in Holiday Homework Notebook.

### Chemistry Worksheet:

**Q1.** Which evidence supports the idea that matter is made up of discrete particles?

- (A) Brownian motion      (B) Thermal expansion  
(C) Pressure increase      (D) Conservation of mass

**Q2.** According to the kinetic theory, what is the primary reason for the diffusion of gases?

- (A) Particle motion      (B) Gravitational pull  
(C) Chemical bonds      (D) Surface tension

**Q3.** The particles of matter in the gaseous state:

- (A) Are closely packed      (B) Move freely  
(C) Are rigid      (D) Have fixed positions

**Q4.** In a liquid, the particles are able to:

- (A) Move only at fixed positions      (B) Slide past each other  
(C) Remain rigid.      (D) Form regular patterns

**Q5.** The latent heat of fusion is the energy required to:

- (A) Change from liquid to solid      (B) Change from solid to liquid  
(C) Change from gas to liquid      (D) Change from liquid to gas

**Q6.** Which of the following is true when water boils?

- (A) Temperature increases rapidly      (B) Particles lose energy  
(C) The process is endothermic      (D) It occurs below 100°C

**Q7.** In evaporation, the temperature of the liquid:

- (A) Decreases      (B) Increases  
(C) Remains constant      (D) Depends on volume

**Q8.** Which factor increases the rate of evaporation?

- (A) Increased humidity      (B) Increased surface area  
(C) Decreased temperature      (D) Decreased wind speed

**Q 9.** When a liquid evaporates, the most energetic molecules:

- (A) Escape into the air      (B) Freeze  
(C) Bond with other particles      (D) Condense into gas

**Q10.** During condensation, the particles:

- (A) Lose energy      (B) Gain energy  
(C) Move apart      (D) Freeze

**Directions:** In each of the following questions, a statement of Assertion is given, and a corresponding statement of Reason is given just below it. Of the statements, given below, mark the correct answer as:

- (a) Both assertion and reason are true, and reason is the correct explanation of assertion.  
(b) Both assertion and reason are true, but reason is not the correct explanation of assertion.  
(c) Assertion is true, but reason is false.  
(d) Assertion is false, but reason is true.

**Q.1.** Assertion : A gas can easily be compressed by applying pressure.

Reason : Since the inter-particle spaces between gases are very large, they can decrease by applying pressure.

**Q.2.** Assertion : Gases exert pressure on the walls of the container.

Reason : The intermolecular force of attraction is very strong in gases.

**Q.3.** Assertion : It is easier to cook food at sea level as compared to higher altitudes.

Reason : The boiling point of water increases at high altitudes.

**Q.4.** Assertion : When a solid melts, its temperature remains the same.

Reason : The heat gets used up in changing the state by overcoming the forces of attraction between the particles.

**Q.5.** Assertion : The solids do not diffuse in air.

Reason : The particles are loosely packed in solids.

**Q.6.** Assertion : The boiling point of water is 100 C.

Reason : The boiling point of water increases at higher altitudes.

**Q.7.** Assertion : The conversion of a solid directly into a gas is known as sublimation.

Reason : Naphthalene does not leave residue when kept open for some time.

**Q.8.** Assertion : Ice floats on water.

Reason : Liquids have lower density than solids.

**Q.9.** Assertion : Camphor burns with a lot of residue.

Reason : Camphor undergoes sublimation.

**Q.10.** Assertion : The rate of evaporation increases with increase in temperature.

Reason: Increase in temperature decreases the kinetic energy of the particles.

### **SOCIAL SCIENCE**

**Note : Do the given assignments on the separate sheets of paper :**

1. Watch any historical movie or biopic and write its reviews- Like Gandhi, Kesari. Prithvi Raj Chauhan, The Legend of Bhagat Singh, Manikarnika-The Queen of Jhansi, Jodha Akbar, Mohenjodaro, Panipat, Padmaavat, Subhas Chandra Bose.

2. **Art Integrated Project:**

**Prepare an integrated project selecting Manipur state of India. Follow the given instructions while making project.**

- **A4 colourful sheets should be used.**
  - **Related picture must be paste.**
  - **Writing should be neat and clean with proper heading.**
- Following topics should be covered during project work**
- **Water Conservation Methods, Rivers and Dams in Manipur.**

- Festivals and Fairs in Manipur.
- Traditional Dress and Dance/Music in Manipur.
- Agriculture in Manipur.
- Tourism in Manipur.
- Politics in Manipur.
- Industries in Manipur.
- Historical Monuments in Manipur.

**3. Prepare a short atlas by preparing maps on A-4 sheets.**

**GEOGRAPHY** (Outline Political Map of India)

**Chapter 1: Resources and Development** (Identification only)

a. Major soil Types

**4. Read the clue in column A and identify me. Write my name in Column B.**

A (I am)	B (My name)
The king of Piedmont and Sardinia. I helped in the unification of Italy.	
A French Emperor. I introduced a Code in 1804.	
The Austrian Chancellor. People consider me a dangerous enemy to society'.	
The founder of a secret society, 'Young Italy'. I inspired the youth to work towards unification.	
The Chief Minister of Prussia and was the architect for the Procedure of unification of Germany.	

**5. Identify the attributes of Nationalism.**

Study the picture give below (pg. 24) and identify the different symbols depicted in this picture. List the symbols and explain the attributes of each.



**6. Prepare a mind maps of the following chapters:**

Ch. 1 Resources and Development. (Geography)

Ch. 2 Forest and Wildlife Resources (Geography)

Ch. 1 Power Sharing (Demo. Politics)

Ch. 2 Federalism (Demo. Politics)

Ch. 1 The Rise of Nationalism in Europe (History)

Ch. 1 Development (Economics)

Ch. 2 Sectors of Indian Economy (Economics)

**7. Assignment : The Rise of Nationalism in Europe**

- Create a timeline collage using images, symbols, and brief descriptions to depict key events in the rise of nationalism in Europe.

**8. Assignment : Sectors of Indian Economy**

- Conduct a survey with family members or neighbours to identify their employment sector (Primary, Secondary, Tertiary).
- Prepare a pie chart to represent the data and write a brief analysis on how each sector contributes to the economy.14

**9. Prepare at least 25 questions related to Heritage Quiz.**

**10-** Learn and write additional competency based questions from each chapter which you have done in the month of April and May. “Make at least 20 additional questions covering the whole chapter and solve them in Holidays Home Work Notebook (10 very short ,6 short answers and 4 long answers.)

**11- Learn and revise following chapters.**

**Geography:-** Chapter 1- Resources and Development

Chapter 2- Forest and Wildlife Resources

**History:-** Chapter 1- The Rise of Nationalism in Europe.

**Democratic Politics:** Chapter 1- Power Sharing

Chapter 2- Federalism

**Economics:** Chapter 1- Development

Chapter 2- Sectors of Indian Economy

### **Syllabus for I-Unit Test:**

**Geography:-** Chapter 1- Resources and Development

**Democratic Politics:** Chapter 1- Power Sharing

Chapter 2- Federalism

### **Submission Guidelines:**

- All assignments should be submitted in a neatly compiled folder with your name, class, and section clearly mentioned.
- Ensure that each project is clearly labelled with the chapter name and project

**PUNJABI**

### **ਲਿਖਤੀ ਕੰਮ**

ਨੋਟ -ਲਿਖਣ ਵਾਲਾ ਸਾਰਾ ਕੰਮ ' ਪੰਜਾਬੀ ਬੀ ' ਦੀ ਕਾਪੀ ਵਿੱਚ ਸਾਫ-ਸਾਫ ਲਿਖਾਈ ਵਿੱਚ ਲਿਖਣਾ ਹੈ।

ਲਿਖਤੀ ਕੰਮ ਜ਼ਰੂਰ ਕਰਨਾ ਹੈ।

ਲੇਖ -1. ਮਿਠਤੁ ਨੀਵੀ ਨਾਨਕਾ ਗੁਣ ਚੰਗਿਆਈਆ ਤਤੁ

ਨੁਕਤੇ: ਜਾਣ ਪਛਾਣ .... ਤੁੱਕ ਦਾ ਅਰਥ..... ਮਿੱਠੇ ਅਤੇ ਕੇੜੇ ਬੋਲਾਂ ਦਾ ਅਸਰ ..... ਨਿਮਰਤਾ- ਅਹਿਮ ਗੁਣ ..... ਹੰਕਾਰ ਇੱਕ ਵੱਡਾ ਐਗੁਣ ਹੈ ..... ਨਿਮਰਤਾ ਧਾਰਨ ਕਰਨ ਲਈ ਯਤਨ ..... ਨਿਮਰਤਾ ਦੇ ਲਾਭ....ਸਿੱਟਾ ।

ਲੇਖ -2 ਆਨ- ਲਾਈਨ ਖਰੀਦਦਾਰੀ

ਨੁਕਤੇ : ਜਾਣ ਪਛਾਣ ..... ਵੱਖ-ਵੱਖ ਕੰਪਨੀਆਂ..... ਆਨ -ਲਾਈਨ ਖਰੀਦਦਾਰੀ.... ਆਨ-ਲਾਈਨ ਖਰੀਦਦਾਰੀ ਦੇ ਲਾਭ ..... ਆਨ -ਲਾਈਨ ਖਰੀਦਦਾਰੀ ਦੇ ਨੁਕਸਾਨ ..... ਖਰੀਦਦਾਰੀ ਕਰਨ ਵਿੱਚ ਸੁਚੇਤ ਰਹਿਣ ਦੀ ਜ਼ਰੂਰਤ .....ਸਾਰੰਸ਼ ।

### **ਪੱਤਰ ਰਚਨਾ :**

ਵਿਦੇਸ਼ ਵਿੱਚ ਰਹਿੰਦੇ ਆਪਣੇ ਮਿੱਤਰ ਨੂੰ ਇੱਕ ਪੱਤਰ ਲਿਖ ਕੇ ਦੱਸੋ ਕਿ ਯੁੱਧ ਦੇ ਕੀ -ਕੀ ਲਾਭ ਤੇ ਹਾਨੀਆਂ ਹੁੰਦੀਆਂ ਹਨ ।

ਕਿਰਿਆਤਮਕ ਕੰਮ (Activity) -

\* ਸਿੱਖ ਧਰਮ ਦੇ ਮੋਢੀ ਸ੍ਰੀ ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਜੀ ਦੇ ਜੀਵਨ ਬਾਰੇ ਜਾਣਕਾਰੀ ਇੱਕਠੀ ਕਰੋ ਤੇ ਉਹਨਾਂ ਦੇ ਜੀਵਨ ਨਾਲ ਸੰਬੰਧਿਤ ਕੋਈ ਪ੍ਰੋਜੈਕਟ/ਪ੍ਰੋਗਰਾਮ (ਕਹਾਣੀ/ਘਟਨਾ) ਲਿਖੋ ।

ਨੋਟ - ਕਿਰਿਆਤਮਕ ਕੰਮ ਕਰਦੇ ਹੋਏ ਹੇਠ ਲਿਖੀਆਂ ਗੱਲਾਂ ਧਿਆਨ ਰੱਖਣੀਆਂ ਹਨ -

\* ਐਕਟੀਵਿਟੀ ਰੰਗਦਾਰ (A 4 size ) ਸੀਟ ਤੇ ਕਰਨੀ ਹੈ ।

\* ਪਹਿਲੇ ਪੇਜ ਤੇ ਕਿਰਿਆਤਮਕ ਕੰਮ ਦੀ ਜਾਣਕਾਰੀ ਦੇਣੀ ਹੈ ਜਿਵੇਂ-

ਪੰਜਾਬੀ ਦਾ ਕਿਰਿਆਤਮਕ ਕੰਮ (Project of Punjabi)

ਫਿਰ ਵਿਸ਼ਾ (Topic) ਉਸ ਤੋਂ ਬਾਅਦ ਵਿਦਿਆਰਥੀ ਆਪਣਾ ਨਾਂ , ਰੋਲ ਨੰਬਰ , admission no ਲਿਖਣਗੇ

ਤੇ ਫਿਰ ਸੌਂਪਿਆ ਗਿਆ ਤੇ ਅਧਿਆਪਕ ਦਾ ਨਾਂ (Submitted to) ਤੇ ਦੁਆਰਾ ਪੇਸ਼ ਕੀਤਾ ਗਿਆ (Submitted by) ਤੇ ਵਿਦਿਆਰਥੀ

ਨੇ ਆਪਣਾ ਨਾਂ ਲਿਖਣਾ ਹੈ।

**Ist UT ਲਈ ਹੇਠ ਲਿਖਿਆ Syllabus ਯਾਦ ਕਰੋ -**

ਪਾਠ ਪੁਸਤਕ ਸਾਹਿਤ ਮਾਲਾ - ਕਵਿਤਾ -ਸੋ ਕਿਉਂ ਮੰਦਾ ਆਖੀਐ

ਕਵਿਤਾ - ਕਿਰਪਾ ਕਰਿ ਕੈ ਬਖਸ਼ ਲੈਹੁ

ਵਾਰਤਕ ਪਾਠ - ਘਰ ਦਾ ਪਿਆਰ

ਪਾਠ ਪੁਸਤਕ ਵੰਨਗੀ - ਕਹਾਣੀ - ਕੁਲਫੀ

ਵਿਆਕਰਨ - ਸਮਾਸੀ ਸ਼ਬਦ

ਮੁਹਾਵਰੇ 'ਕ' ਤੇ 'ਖ' ਵਾਲੇ

### ARTIFICIAL INTELLIGENCE

**A. Execute following programs in Python and write any 7 programs in your practical notebook with output generated:**

1. Program to check if a person can vote

2. To check the grade of a student

3. Input a number and check if the number is positive, negative or zero and display an appropriate message

4. To print first 10 natural numbers

5. To print first 10 even numbers

6. To print odd numbers from 1 to n
7. To print sum of first 10 natural numbers
8. Program to find the sum of all numbers stored in a list .9. Program to calculate perimeter and area of any shape given by user.
10. Program to calculate simple interest.

**B. Make a presentation on topic "Applications of AI" or "Machine Learning" and send by mail on following mail id : activities.davftb@gmail.com . Please note that you have to mention your Name, Roll No, Class, Section and admission number in subject section of EMail.**

For example-

Abhishek, Roll No 38, X Tulip, 9899

**C. Revise following syllabus for unit test:**

Unit 1:

Revisiting AI Project Cycle & Ethical Frameworks for AI

UNIT 2:

Advance Concepts of Modeling in AI

Unit 1 Communication Skills -II (Employability Skill)

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FATEHABAD