



ARMY PUBLIC SCHOOL, CLEMENT TOWN, DEHRADUN  
SUMMER HOLIDAY HOMEWORK  
CLASS X (2025-26)

**ENGLISH**

Do the following tasks in your English notebook:

1. The problem of speeding traffic on colony roads causing accidents is increasing day by day. As a young citizen, who wants to minimise the accidents caused by them, write a letter to the editor of a national daily in about 120 words, expressing your concern at the situation and suggesting measures to resolve the problem and drawing attention of the concerned authorities. You are Sanjana Khanna/Sanjay Khanna of 567, Madhur Apartments Amar Vihar, Aram Nagar.

2. The street lights of your locality are not functioning properly leaving stretches of dark/blind spots at night. Due to this problem, chain and mobiles snatching incidents have increased. Write a letter to the editor of a local daily, in about 120 words, expressing your concern at the situation and suggesting measures to resolve the problem. You are Ramesh Roha/Gauri Roha of 709, Gold Apartments, Prem Vihar, Amar Nagar.

3. As Arya Khanna, the School Literary Captain of Ujjwal Academy, Old City, Kiladerabad, you believe that languages can help bridge regional divides and promote unity.

Write a letter to the Editor of a national daily, in about 120 words, suggesting the introduction of an online regional language learning programme managed and run by student councils and language clubs in the city. The programme aims to help residents who have recently relocated to a new region in picking up the local language organically. Share the importance of such a programme and suggest a feasible way to execute it along with possible activities.

4. Answer the following questions in about 100-120 words

(i) Struggles teach us many life-skills. Write a paragraph on the importance of struggles with reference to the story 'A Triumph Of Surgery'.

(ii) Why does Robert Frost use the symbols of nature to convey the message of peace and harmony to the world? ( Fire and Ice)

(iii) Hari Singh didn't confess that he robbed Anil. Did he lack the courage to do so or was he embarrassed at his action? Explain.

<p><b>HINDI</b></p>	<p>*‘नई शिक्षा नीति’ विषय पर दिए गए संकेत बिंदुओं के आधार पर लगभग 80 से 100 शब्दों में एक अनुच्छेद लिखिए। संकेत बिंदु- नई शिक्षा नीति जारी, नई शिक्षा नीति के प्रमुख प्रावधान, देश के विकास में योगदान।</p> <p>*आपके क्षेत्र की सड़क बद्दहाल अवस्था में हैं, जिसके कारण आए दिन दुर्घटनाएं होती रहती हैं। उसकी जानकारी देते हुए उपयुक्त कार्यवाही हेतु शहरी विकास मंत्री को पत्र लिखिए।</p> <p>*उत्तराखंड और कर्नाटक के पाँच-पाँच साहित्यकारों का तुलनात्मक अध्ययन करते हुए उनके विषय में संक्षेप में लिखिए और संबंधित चित्र भी लगाइए।</p> <p>*‘व्याकरण सार’ पुस्तक से पाठ समास का प्रश्न 2 पृष्ठ संख्या 88, 89 तथा पाठ मुहावरे का प्रश्न 2 पृष्ठ संख्या 127 को पुस्तक में ही हल कीजिए।</p> <p>*प्रथम आवधिक परीक्षा हेतु निर्धारित संपूर्ण पाठ्यक्रम की पुनरावृत्ति कीजिए।</p> <p>नोट - पत्र तथा अनुच्छेद अपनी कक्षाकार्य की कॉपी में करें, व्याकरण का कार्य व्याकरण की पुस्तक में करें तथा उत्तराखंड व कर्नाटक का तुलनात्मक अध्ययन के लिए अलग फाइल</p>
	<p><b><u>REVISION WORKSHEET</u></b></p> <p><b><u>NOTE:</u></b> Do worksheet in class notebook, Make a separate file for Art Integrated Project.</p> <p><b><u>CH-1 REAL NUMBERS</u></b></p> <p>Q1. Using prime factorization, find the HCF and LCM of 3760,2624,1052.</p> <p>Q2. Find the largest number which divides 70 and 125 leaving remainders 5 and 8 respectively.</p> <p>Q3. In a teacher’s workshop, the number of teachers teaching French, Hindi and English are 48,80 and144 respectively. Find the minimum number of rooms required if in each room the same number of teachers are seated and all of them are of the same subject.</p> <p>Q4.Prove that <math>3 + 5\sqrt{2}</math> is an irrational number.</p> <p><b><u>CH-2 POLYNOMIALS</u></b></p> <p>Q5. If <math>\alpha</math> and <math>\beta</math> are the zeroes of the polynomial <math>x^2-5x+k</math> such that <math>\alpha - \beta=1</math>, find the value of k.</p> <p>Q6. Find the quadratic polynomial whose one zero is 5 and product of zeroes is 2.</p> <p>Q7. Find the zeroes of the polynomial <math>p(y)=y^2 + 3</math> and also verify the relation between the zeroes and the coefficient.</p>

Q8. Find the zeroes of the quadratic polynomial  $5x^2 - 4 - 8x$  and verify the relationship between the zeros and the coefficients.

### **CH-3 PAIR OF LINEAR EQUATIONS**

Q9. If the system of linear equations  $2ax + (a + b)y = 28$  and  $2x + 3y = 7$  have an infinite number of solutions then find the values of  $a$  and  $b$ .

Q10. A and B are friends and their ages differ by 2 years. A's father D is twice as old as A and B is twice as old as his sister C. The age of D and C differ by 40 yr. Find the ages of A and B.

Q11. Plot the graph of the equations  $x - y + 1 = 0$  and  $3x + 2y - 12 = 0$ . Using the graph find the value of  $x$  and  $y$ .

Q12. Find the values of ' $m$ ' and ' $n$ ' for which the following system of linear equations has infinitely many solutions :  $3x + 4y = 12$

### **CH-4 QUADRATIC EQUATIONS**

Q13. Solve for  $x$ :  $9x^2 - 6px + (p^2 - q^2) = 0$

Q14. Three consecutive integers are such that sum of the square of second and product of the other two is 161, find the three integers.

Q15. A train travels at a certain average speed for a distance of 54 kilometer and then travels a distance of 63 kilometer at an average speed of 6 km/hr more than the first speed. If it takes 3 hours to complete the journey, what was its first average speed?

Q16. If the roots of the quadratic equations  $(a-b)x^2 + (b-c)x + (c-a) = 0$  are equal, prove that

$$2a = b + c$$

### **CH-5 ARITHMETIC PROGRESSION**

Q17. Find the middle term of the AP: 6, 13, 20, ..., 216

Q18. If 7 times the seventh term of the A.P is equal to 5 times the fifth term, then find the of its 12th term.,

Q19. If the sum of first 7 terms of an AP is 49 and that of first 17 terms is 289 find the sum of its first 20 terms.

Q20. Veer wants to participate in a 200m race. He can currently run that distance in 51 seconds and with each day of practice it takes him 2 seconds less. He wants to complete it in 31 seconds.

(a) What is the minimum number of days he needs to practice till his goal is achieved?

	<p>(b) If the nth term of an AP is given by <math>a_n = 2n + 3</math>, then find the common difference of AP</p> <p><b>II. To be done in Lab Manual</b></p> <p>Do Lab Manual Activity -4,5 based on Arithmetic Progression.</p> <p><b>III. Art Integrated Project based on sister state Karnataka under Ek Bharat Shresth Bharat</b></p> <p>Make a comparative study between the states of Uttarakhand and Karnataka on the basis of Cuisine, Agriculture, Dress.</p> <p>Supplement your work with pictures, pattern, shapes, bar graph, pie chart, Percentage, Ratio.</p>
<p><b>SCIENCE</b></p>	<p><b>PHYSICS:</b></p> <ol style="list-style-type: none"> <li>1. Create a question bank comprising of 20 questions from PT1 Syllabus and solve in physics notebook.</li> <li>2. Make a collage on any one of the following topic: Sources of energy and their conservation OR Contribution of Indian Scientists in science and technology</li> <li>3. SCIENCE DIARY: ( in physics notebook) ( 5 Entries)</li> </ol> <p><b>A science fact or observation, you saw during the day( eg- a rainbow, melting, plant growth etc). Explain which topic it relates to and why it happens?</b></p> <p><b>Biology and Chemistry-</b></p> <ol style="list-style-type: none"> <li>1. Students will make decorative items by using POP.</li> <li>2. Students will make a well labelled diagram of excretory system, digestive system, Human heart and respiratory system in A4 sheet and decorate them with the things available at home.</li> <li>3. Find main reason of Ulcer, Cardiac arrest and Cancer and write a note in project file.</li> <li>4. Make project on flora and Fauna Karnataka and Uttarakhand.</li> <li>5. In Adobe students will make presentation on various applications of neutralisation reaction which they see in their daily life.</li> <li>6. Students will write about preparation and uses of 5 salts which they see in their daily life.</li> </ol>
<p><b>SOCIAL SCIENCE</b></p>	<p><b>1 Make An Interdisciplinary Projects on Following Topics: -</b></p> <p><b>History :-</b> Making of Global world.</p> <p><b>Geography :</b> Lifelines of National Economy</p> <p><b>Economics:</b> Globalisation and the Indian Economy.</p>

	<p><b>NOTE:</b></p> <ol style="list-style-type: none"> <li>1. <b>Make Project Using the Guidelines Shared in Class Group</b></li> <li>2. This Project Is Given in Curriculum by CBSE and has to be evaluated for internal assessment.</li> <li>3. Be creative, colourful, informative and original in your project work.</li> <li>4. The Project should not be more than 15 pages and must not be just a copy paste work. Use your understanding to express the analysis and conclusions.</li> </ol> <p><b>2. Revise PT1 syllabus</b></p> <ol style="list-style-type: none"> <li>1) <b>History :</b> Ch 1 Nationalism in Europe</li> <li>2) <b>Geography :</b> CH 1 Resource and Development</li> <li>3) <b>POL SCIENCE:</b>Ch 1 Power Sharing</li> <li>4) <b>ECONOMIC:</b> Ch 1 Development.</li> </ol> <p>3. On the occasion of Environment Day ( 5 June), Plant a tree in your garden.</p>
<p><b>SANSKRIT</b></p>	<p>*पुस्तक शेमुषी से पाठ १,२,३ के शब्द-अर्थ याद कीजिए ।</p> <p>*अस्माकम् पर्यावरणम् शीर्षक पर संस्कृत में एक अनुच्छेद लिखिए ।</p> <p>*स्वविद्यालयस्य प्रधानाचार्याय दिनद्वयस्य रुग्णावकाशार्थं प्रार्थनापत्रं लिखतु।</p> <p>*संस्कृत भाषा में प्रयोग किए जाने वाले अव्यय पदों को उत्तर पुस्तिका में लिखकर याद कीजिए</p>
<p><b>INTRODUCTION TO FINANCIAL MANAGEMENT</b></p>	<p>Prepare a detailed project report on any one of the following topics:-</p> <ol style="list-style-type: none"> <li>A. Mutual Funds</li> <li>B. Primary Market</li> <li>C. Secondary Market</li> </ol> <p>Highlighting their structure, working mechanism, advantages, and impact on the Indian financial system.</p> <p>Choose one topic and include recent data, case studies, and analysis."</p>
<p><b>ARTIFICIAL INTELLIGENCE</b></p>	<p>Read the given scenario carefully, and draft a detailed Solution of a given case by using all phases of the AI Project Cycle, including 4Ws Canvas and problem statement template, all the data features, data visualization tools and other details needed to complete this project.</p> <p><b>Make sure each student's solution is different from one another.</b></p> <p><b><u>Submit this project as hardcopy using a clip file.</u></b></p> <p>Design <b>First page using Adobe Express</b> related to scenario.</p>

### Scenario 1: Blood Requirement Management in Healthcare (Critical Thinking)

Case Study Scenario: A hospital is experiencing frequent shortages of blood supplies, particularly for patients in critical care who require urgent transfusions. Blood donations are often unpredictable, and the hospital is struggling to manage blood inventory efficiently, especially for rare blood types. The hospital is considering using AI to predict and manage blood requirements based on patient data and historical trends.

The hospital has access to data including the number of surgeries, the types of medical conditions requiring blood, seasonal blood donation trends, and patient blood type data. The goal is to implement a system that predicts future blood requirements and helps the hospital optimize its blood donation drives.

### INFORMATION TECHNOLOGY

Do the activity zone, given on page number 42, Part B: Digital Documentation Advanced.

The image shows a page from a digital textbook titled 'Activity Zone' under the heading 'Experiential & Collaborative Learning'. It contains six numbered tasks for students to complete in a Microsoft Word document. Task 1 involves writing an article on 'Importance of Protecting Women's Rights' with specific formatting requirements: red font color, Lucida Sans font face, size 24, and yellow text highlights. Task 2 asks for a document with sports photos and text wrapping. Task 3 is a two-page brochure on a hill station. Task 4 is a poster design with a specific layout and text. Task 5 is a document on 'Historical Monuments in India' with graphics. Task 6 is a brochure for a school annual day. The poster design task (4) includes a table with the following content:

Are you really helping the needy, when you give money to beggars?		
<b>PLEASE THINK AGAIN!!!</b>	<b>YOUR GENEROSITY HAS RESULTED IN:</b> More and more number of people taking to begging as a profession. Exploitation of Children for begging purposes. Interference in the free flow of traffic. <b>REMEMBER! Your help makes a person a beggar for life.</b>	
<b>PLEASE DO NOT GIVE MONEY TO BEGGARS</b>		

Note: Students will take printouts of compiled questions in one document from question no. 1-6, the output should contain screenshots of the working window along with the questions written at the top. Title bar will contain your name in Capital along with class and section e.g: HARSHIT\_10H.

**Submit this assignment as hardcopy using a clip file.**