

The GURUKUL NILOKHERI

Holidays Assignment

Class : X

Subject - English

<u>Tasks</u>	<u>Instructions</u>
Travelogue	Write a detailed account of your visit to any of the followings during summer break:- Hill station, Friends/relatives/ historical place etc. (Time, when it began, reached how (conveyance) no. of persons, stayed hotel, visiting points)place feeling, experience came back. Photos can be pasted (returnable)
Tense Chart	Make a tense chart writing all 12 verbs forms. 3 Examples of affirmative, negative and interrogative (one each of them) Underline the verbs in the sentences.
Shakespeare	You shall read about 'Julius Caesar' and write the summary of the play. Mention:- the plot & characters in your summary.
Letter to the Editor	Write 4 letters to the editor on the most significant events, took place in the month of June (One letter per week)
Novel Reading	Write summary of the chapters 1 to 5 from 'The Story of My Life'. Write about the 3 major events in the chapters 1 to 5. Write brief character sketches of Captain Arthur H. Keller and Katherine Adams Keller.
Exploring literary terms	Write five examples of each of them from the chapters you have read. Simile, Metaphor, Personification, Alliteration, Repetition, Refrain, Onomatopoeia, Pun, Paradox, Symbol and Irony.

विषय—हिन्दी

1. अपने देश के लिए मर-मिटने वाले बलिदानियों का संक्षिप्त परिचय देते हुए, उनसे मिलने वाली शिक्षा को अपने शब्दों में लिखिए।
2. 'ग्लोबल वार्मिंग' के कारण ऋतुओं में क्या परिवर्तन आ रहे हैं? इस समस्या से निपटने के लिए आपकी क्या भूमिका हो सकती है?
3. 'माँ का अँचल' माँ की ममता का प्रतीक है। इसी अँचल में दुख के क्षणों में शरण लेने वाला बच्चा युवा होकर उसके महत्त्व को भूलकर उसको तिरस्कृत करता है। प्रस्तुत कहानी आप जैसे युवाओं के मन में माँ के प्रति किस कर्तव्य-बोध को जगाती है? स्पष्ट कीजिए।

पत्र—लेखन :

1. ग्रीष्मावकाश में अतिरिक्त कक्षाएँ लगाने का अनुरोध करते हुए अपने विद्यालय के प्रधानाचार्य को प्रार्थना-पत्र लिखिए।
2. अपने इलाके में अनियमित जलापूर्ति से होने वाली तकलीफों का वर्णन करते हुए समस्या निवारण हेतु जलापूर्ति अधिकारी को पत्र लिखिए।

निबंध—लेखन :

1. मोबाइल फोन, संपत्ति और विपत्ति की तरह ही सुखद और दुखद है।
2. विद्यार्थी जीवन में अनुशासन का महत्त्व

Subject - Social Science

A) Prepare a project on any one topic which should not exceed 15 pages and should include the following headings :

- 1) Preface (cover page showing project title, student information, school and year)
- 2) Index (list of contents with page numbers)
- 3) Acknowledgement (acknowledging the institution, offices and libraries visited and persons who have helped)
- 4) Detailed report of topic :
 - (a) Purpose, Aim, Methodology and experience while doing the project.
 - (b) Chapters with relevant headings
 - (c) Summary or conclusions based on findings.
 - (d) Planning and activities to be done during the project, if any giving a calendar of activities.
- 5) Bibliography : Should have the titles, pages referred, author, publisher, year of publication and if a website, the name of the website with the specific weblink which has been used.
- 6) All the photographs, maps & sketches should be labelled.
- 7) Teacher's evaluation report performance is to be attached at the end of the project

B) CBSE Guidelines for the preparation of Project :

- 1) The total length of the project report will not be more than 15 written pages of foolscap size (A-4 size)
- 2) The project report will be handwritten and credit will be awarded to original drawings, illustrations and creative use of materials.
- 3) The students should present the project report in a neatly bound simple folder.
- 4) The project report will be development and presented in the order mentioned before.

C) Do the assignments given covering all the chapters in the month of April & May.

(Economics)

3. Prepare a project on topic –‘Money and Credit’
It should include-
- Modern and Traditional form of money
 - Difference between formal and informal source of credit
 - Case study of a self help group
 - Role of a bank, etc.

Prepare a project on **any one** topic which should not exceed 15 pages and should include the following heads :

- Preface
- Index
- Acknowledgement
- Detailed report of the topic
- Bibliography
- Teacher’s Evaluation Sheet

(Political Science)

- Pressure Groups OR Interest Groups
 - Meaning of Pressure Groups/Interest Groups
 - Differentiate between Public interest Groups and Sectional Interest Groups
 - Case study - Any one - (a) Bolivia or (b) Nepal

(Geography)

- Prepare a Project on any one topic
 - Tsunami
 - Survival Skills
 - Alternative Communication systems during disaster
 - Sharing Responsibilities

The Project should include -

- Meaning of disaster
- Meaning of disaster management
- Why is it needed?
- Explanation of the topic
- A case study on the topic, etc.

THE GURUKUL NILOKHERI
HOLIDAYS HOMEWORK
PRACTICE PAPER
SUBJECT - SCIENCE
CLASS - X

MM : 80

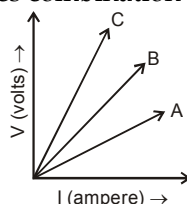
Section - A

- 1) What role does bile play in digestion?
- 2) On what basis is a chemical equation balanced ? 1×2=2
- 3) Why do the wires connecting an electric heater to the mains not glow while its heating element does?
- 4) Arteries have thick elastic walls, while veins have valves. Explain?
- 5) Identify the type of reaction from 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) $\text{CuSO}_4 + \text{Zn} \rightarrow \text{ZnSO}_4 + \text{Cu}$ 2×3=6
- 6) (i) Why are the valves needed in the heart?
(ii) Leakage of blood from vessels reduces the efficiency of pumping system. How is the leakage prevented?
- 7) Why alloys are used to make standard resistors? Give one example of that alloy.
- 8) A wire of length L and resistance R is stretched to that the length is doubled and area of cross section is halved. How will its :
(a) resistance change?
(b) resistivity change?
- 9) Two lamps, one is rated 100W at 220V and the other 60W at 220V, are connected in parallel to a 220V supply. Find the current drawn from the supply line.
- 10) What are villi? Mention their functions?
- 11) Name the following with reference to the excretory system:
(i) part in which urine is produced
(ii) the part which stores the urine
(iii) the part which connect kidney & urinary bladder.
- 12) What are the methods used by plants to get rid of waste products?
- 13) What is redox reaction ? Identify the substance oxidised and the substance reduced in the following reactions
(i) $2\text{PbO} + \text{C} \rightarrow \text{Pb} + \text{CO}_2$
(ii) $\text{MnO}_2 + 4\text{HCl} \rightarrow \text{MnCl}_2 + 2\text{H}_2\text{O} + \text{Cl}_2$
- 14) What happens when
(i) Slaked lime reacts with chlorine ?
(ii) Sodium hydrogen carbonate is heated ?
(iii) Gypsum is heated ?
- 15) What are the final products after digestion of carbohydrates, proteins & fats? 10×3=30
- 16) On heating blue coloured powder of copper (II) nitrate in boiling tube, copper oxide (black), oxygen gas and a brown gas 'X' is formed
(a) Write a balanced chemical equation of the reaction.
(b) Identify the brown gas 'X' evolved.
(c) Identify the type of reaction.
(d) What could be the pH range of aqueous solution of the gas 'X'
- 17) (i) What are acids and bases? Give two tests to distinguish these.
(ii) How do they differ in their reactions with metals ?
(iii) What happens when they react with each other ?

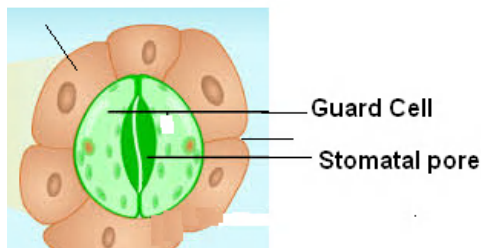
- 18) Draw the nature of V-I graph for a nichrome wire. (V-potential difference, I-current). A metallic wire of 625 mm length offers a 4Ω resistance. If the resistivity of the metal is 4.8×10^{-7} ohm metre, then calculate the area of cross-section of the wire.
- 19) Differentiate between the structure and functioning of alveoli in lungs and nephrons in kidneys?
- 20) (a) State Ohm's law. Express it mathematically.
 (b) Write symbols used in electric circuits to represent :
 (i) variable resistance
 (ii) voltmeters
 (c) An electric bulb is rated 220V and 100W. When it is operated on 110V, what will be the power consumed?
- 21) Give functions of all four chambers of human heart? 6×5=30

Section - B

- 1) Three V.I graphs are drawn individually for two resistors and their series combination. Out of A, B, C and one represents the graph for the series combination of the other two. Give reason for your answer.



- 2) (a) Define one volt.
 (b) Draw symbols of the following components as used in circuit diagrams :
 (i) electric bulb (ii) ammeter
- 3) On basis of given diagram (write function of the labelled parts)



3×2=6

- 4) An aqueous solution turns red litmus solution blue. Excess addition of which of the following solution would reverse the change?
 (a) Baking powder (b) Lime
 (c) Ammonium hydroxide solution (d) Hydrochloric acid
- 5) Sodium carbonate is a basic salt because it is a salt of
 (a) strong acid and strong base (b) weak acid and weak base
 (c) strong acid and weak base (d) weak acid and strong base
- 6) One of the constituents of baking powder is sodium hydrogen carbonate, the other constituent is
 (a) hydrochloric acid (b) tartaric acid (c) acetic acid (d) sulphuric acid
- 7) The pH of the gastric juices released during digestion is
 (a) less than 7 (b) more than 7 (c) equal to 7 (d) equal to 0
- 8) Which of the following phenomena occur, when a small amount of acid is added to water?
 (i) Ionisation (ii) Neutralisation (iii) Dilution (iv) Salt formation
 (a) (i) and (ii) (b) (i) and (iii) (c) (ii) and (iii) (d) (ii) and (iv)
- 9) Which of the following is used for dissolution of gold?
 (a) Hydrochloric acid (b) Sulphuric acid (c) Nitric acid (d) Aqua regia
- 6×1=6

THE GURUKUL NILOKHERI
HOLIDAY'S HOMEWORK
PRACTICE PAPER - I
SUBJECT - MATHS
CLASS - X

MM : 90

Section - A

- 1 Find zeroes of $4x^2-9$.
- 2 Find the value of $x+y$ if $2x + y = 7$ and $3x + 2y = 12$.
- 3 The mean of six observation $(x+6)$, $(x-6)$, x , $x+8$, $x+12$ and $x-2$ is 26. Find the value of x .
- 4 If p and q are the roots of $ax^2 - bx + c = 0$, $a \neq 0$ then find value of $p+q$.

4×1=4

Section - B

- 5 If one of the zeros of the quadratic polynomial $(k-1)x^2 + kx + 1$ is -3 then find value of k .
- 6 Find remainder when $x^3 - ax^2 + 6 - a$ is divisible by $x-a$.
- 7 Find $x = a$ and $y = b$ is the solution of the equations $x-y = 2$ and $x+y=4$ then find value of a and b .
- 8 Mean of the following data is 2.4. Find the value of X .

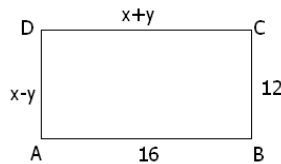
X_i	0	1	2	3	x	5
F_i	6	4	3	2	5	0

- 9 Find the zeroes of $4x^2 + 5\sqrt{2}x - 3$ and verify relationship between the zeroes and the coefficients.
- 10 Solve $\frac{3}{x} - \frac{2}{y} = 0$ and $\frac{2}{x} + \frac{5}{y} = 19$ and hence find p if $y = px + 3$.

6×2=12

Section - C

- 11 In the given figure, ABCD is a rectangle. Find the values of x and y .



- 12 Find the value of a and b if pair of linear equations has infinite solution
 $2x - (a-4)y = 2b+1$
 $4x - (a-1)y = 5b - 1$
- 13 Find mean of the following table :

Marks	More than 0	More than 10	More than 20	More than 30	More than 40	More than 50
No. of students	60	56	40	20	10	3

- 14 Find f_1 and f_2 if mean of the following table 50 :

C.I.	0-20	20-40	40-60	60-80	80-100	Total
f_i	17	f_1	f_2	24	19	120

- 15 On dividing $3x^3 + 4x^2 + 5x - 13$ by $g(x)$ the quotient and remainder were $3x+10$ and $16x - 43$ respectively. Find $g(x)$
- 16 Solve $\frac{x}{a} - \frac{y}{b} = a - b$ $ax + by = a^3 + b^3$
- 17 If the sum of the zeros of the polynomial $p(x) = (a+1)x^2 + (2a+3)x + (3a+4)$ is -1 , then find the product of its zeros.
- 18 Show that $\frac{1}{2}$ and $-\frac{3}{2}$ are the zero's of the polynomial $4x^2 + 4x - 3$ and verify the relationship between zeros and coefficients of polynomial.
- 19 Find mean and mode of following table :

No. of days	Less than 5	Less than 10	Less than 15	Less than 20	Less than 25
No. of students	29	224	465	582	635

- 20 Find zeroes of $4\sqrt{5}x^2 - 17x - 3\sqrt{5}$.

$10 \times 3 = 30$

Section - D

- 21 Points A and B are 80 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 8 hours. If they travel towards each other, they meet in 1 hour 20 minutes. What are speeds of the cars.
- 22 Find value of x and y in the following distribution table, if $N = 100$ and median is 32.

Marks obtained	0-10	10-20	20-30	30-40	40-50	50-60	Total
No. of students	10	x	25	30	y	10	100

- 23 The lengths of 40 leaves of a plant are measured correct to the nearest millimetre and the data obtained is represented in following table :

length (mm)	118-126	127-135	136-144	145-153	154-162	163-171	172-180
No. of leaves	3	5	9	12	5	4	2

Find median length of leaves.

- 24 Find k so that the polynomial $x^2 + 2x + k$ is a factor of $2x^4 + x^3 - 14x^2 + 5x + 6$. Also find all zeroes of the two polynomials.
- 25 Solve for x and y :
- $$\frac{2}{3x+2y} + \frac{3}{3x-2y} = \frac{17}{5}, \frac{5}{3x+2y} + \frac{1}{3x-2y} = 2$$
- 26 Solve the equations graphically $2x+y = 2$, $2y-x=4$ what is the area of triangle formed by the two lines and line $y = 0$?
- 27 A boat goes 24 km upstream and 28 km downstream in 6 hours. If goes 30 km upstream and 21 km downstream in $6\frac{1}{2}$ hours. Find the speed of boat in still water and also speed of stream.
- 28 Divide $3x^2 - x^3 - 3x + 5$ by $x - 1 - x^2$ and verify the division algorithm.
- 29 Given that $\sqrt{2}$ is a factor of $6x^3 + \sqrt{2}x^2 - 10x - 4\sqrt{2}$. Find its all zeroes.

30 A fraction becomes $\frac{9}{11}$, if 2 is added to both the numerator and the denominator. If 3 is added to both the numerator and the denominator it becomes $\frac{5}{6}$. Find the fraction.

31 During the medical check-up of 35 students of a class, their weights were recorded as follows :

weight (kg)	Less than 38	Less than 40	Less than 42	Less than 44	Less than 46	Less than 48	Less than 50	Less than 52
No. of students	0	3	5	9	14	28	32	35

Draw a less than type ogive for the given data. Hence, obtain the median weight from the graph and verify the result by using the formula. **11×4=44**

Answer key - X - Maths

- (1) $-3/2, 3/2$ (2) 5 (3) $x=23$ (4) $\frac{b}{a}$ (5) $\frac{4}{3}$ (6) $6 - a$
- (7) $a = 3, b = 1$ (8) $x = 6.4$ (9) $\frac{-3}{\sqrt{2}}, \frac{1}{2\sqrt{2}}$ (10) $p=0$ (11) $x = 14, y = 2$
- (12) $a = 7, b = 3$ (13) 26.5 (14) $f_1 = 28, f_2 = 32$ (15) $g(x) = x^2 + x + 3$ (16) $x = a^2, y = b^2$
- (17) 2 (18) (19) mean = 12.26, mode = 11.35 (20) $\frac{3}{\sqrt{5}}, \frac{\sqrt{5}}{4}$
- (21) Speed of car A = 35 km/h, Speed of car B = 25 km/h (22) $x = 9, y = 16$
- (23) 146.75 mm (24) $-3, -\frac{1}{2}, 1, 2$ (25) $x = 1, y = 1$
- (26) area of $\Delta = 5$ sq. unit (27) speed of boat = 10 km/h, speed of stream = 4 km/h
- (28) (29) $-\frac{1}{\sqrt{2}}, -\frac{4}{3\sqrt{2}}, \sqrt{2}$ (30) $\frac{7}{9}$ (31) 46.5

THE GURUKUL NILOKHERI
HOLIDAY'S HOMEWORK
PRACTICE PAPER - II
SUBJECT - MATHS
CLASS - X

MM : 90

Section – A

- 1) For a certain distribution, mode and median were found to be 1000 and 1250 respectively. Find mean for this distribution, using an empirical relation.
- 2) Form a quadratic polynomial whose one zero is 8 and the product of the zeroes is -56.
- 3) The value of k for which the pair of lines $kx + 3y + 1 = 0$, $2x + y + 3 = 0$ represent intersecting lines.
- 4) Solve for x : $\sqrt{2}x^2 + 7x + 5\sqrt{2} = 0$ **4×1=4**

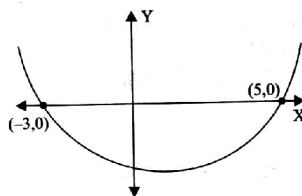
Section – B

- 5) For what value of k does the equation $(k - 12)x^2 + 2(k - 12)x + 2 = 0$ have equal roots?
- 6) Given the linear equation $3x + 4y = 59$ write another linear equation in these two variables such that the geometrical representation of the pair so formed is :
 - (i) intersecting lines
 - (ii) coincident lines
- 7) On dividing the polynomial p(x) by $g(x) = 4x^2 + 3x - 2$, the quotient $q(x) = 2x^2 + 2x - 1$, and remainder $r(x) = 14x - 10$. Find p(x).
- 8) In ΔABC , $\angle A = x^\circ$, $\angle B = y^\circ$ and $\angle C = \angle A + \angle B$. If $4y - 3x = 10$ find the measures of the angles of ΔABC .
- 9) Given below is a cumulative frequency distribution of 'less than type' :

Marks obtained	less than 20	less than 30	less than 40	less than 50
Number of students (cumulative frequency)	8	13	19	24

Change the above data in to a continuous grouped frequency distribution.

- 10) The graph of the curve $y = x^2 + bx + c$ is shown in figure. Find b and c.



6×2=12

Section – C

11) Find all the zeroes of the polynomial $x^4 - 3x^3 - 5x^2 + 21x - 14$, if two of its zeroes are $\sqrt{7}$ and $-\sqrt{7}$.

12) What must be subtracted or added to $p(x) = 8x^4 + 14x^3 - 2x^2 + 8x - 12$ so that $4x^2 - 3x - 2$ is a factor of $p(x)$?

13) Find the zeroes of the quadratic polynomial $x^2 - 3$, and verify the relationship between the zeroes and coefficients.

14) The age of father is three years more than three times the age of his son. Three years hence, the father's age will be ten years more than twice the age of the son. Determine their present ages.

15) For which values of a and b , will the following pair of linear equations have no many solutions :

$$(3k + 1)x + 3y = 2$$

$$(k^2 + 1)x + (k - 2)y - 5 = 0$$

16) Solve the following system of linear equations :

$$a(x+y) + b(x - y) - (a^2 - ab + b^2) = 0$$

$$a(x+y) - b(x - y) - (a^2 + ab + b^2) = 0$$

17) Life time of 400 fans are given in the following frequency distribution :

Life time (in hours)	2000- 2400	2400- 2800	2800- 3200	3200-3600	3600-4000
Number of fans	50	70	150	100	30

Find the modal life time of the fan.

18) Find the value of f_1 from the following data if its mode is 65.

Class	Frequency
0-20	6
20-40	8
40-60	f_1
60-80	12
80-100	6
100-120	5

19) Find the roots of the given equation :

$$\frac{x-1}{2x+1} + \frac{2x+1}{x-1} = \frac{5}{2}; \forall x \neq -\frac{1}{2}, 1$$

20) Solve the following quadratic equation by factorisation method :

$$15(x+3)^2 - 19(x+3) - 8 = 0$$

10×3=30

Section – D

- 21) For the following frequency distribution, draw a 'less than type' ogive and a 'more than type' ogive

Class	0-20	20-40	40-60	60-80	80-100
Frequency	5	12	20	11	2

Also, find median from the curves.

- 22) The median of the following data is 110. Find the values of x and y if the total frequency is 100.

Class interval	Frequency
20-40	6
40-60	9
60-80	$2x+3$
80-100	14
100-120	20
120-140	$4y-5$
140-160	10
160-180	8
180-200	7

- 23) The following table shows age distributions of persons in a particular region. Find the median age.

Age (years)	No. of persons
Below 10	2
Below 20	5
Below 30	9
Below 40	12
Below 50	14
Below 60	15
Below 70	16

- 24) A man started his job with a certain monthly salary and earned a fixed increment every year. His salary was ₹ 18,000 after 4 years service and ₹ 25,500 after 10 years service. What was his starting salary and his annual increment ?

What information you can imbibe from his life?

- 25) 12 women and 8 men can together finish a work in 10 days, while 8 women and 6 men can finish it in 14 days. Find the time taken by 1 woman alone to finish the work and also that of taken by 1 man alone. Why it is preferred to work in team?
- 26) Places A and B are 100 km apart from each other on a highway. A car starts from A and another from B at the same time. If they move in the same direction, they meet in 10 hours and if they move in opposite directions, they meet in 1 hour and 40 minutes. Find the speed of the cars.
- 27) On dividing $p(x) = 5x^4 - 4x^3 + 3x^2 - 2x + 1$ by $g(x) = x^2 + 2$, if $q(x) = ax^2 + bx + c$, find a , b and c .
- 28) Divide $x^4 + 1$ by $x - 1$ & verify Division algorithm.

29) In a flight of 600 km, an aircraft was slowed due to bad weather. The average speed for the trip was decreased by 200 km/hr and the time of flight increased by 30 minutes. Find the duration of flight.

30) Find the roots of the following quadratic equation, if they exist, by applying the quadratic formula.

$$9x^2 - 9(a+b)x + (2a^2 + 5ab + 2b^2) = 0$$

31) At t minutes past 2 pm, the time needed by the minutes hand of a clock to show 3 pm was found

to be 3 minutes less than $\frac{t^2}{4}$ minutes. Find t .

11×4=44