

The GURUKUL NILOKHERI

Holidays Assignment

Class : IX

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 of each. Underline the verbs in the sentences.
Shakespeare	You shall read about 'Hamlet' and write the summary of the play 'Halmet' (available on internet) Mention:- the plot , characters in your summary read
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 7, 8, 9 & 10 from 'Three Men in a Boat' . Write about the 3 major events in the chapters 7, 8, 9 & 10. Write brief character sketch of Harris and George.
Exploring literary terms	Define literary terms given below and 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

- पाठ्यपुस्तक में संकलित साखियों और पदों के आधार पर कबीर के धार्मिक और सांप्रदायिक सद्भाव संबंधी विचारों पर प्रकाश डालिए।
- 'ल्हासा की ओर' पाठ के आधार पर तिब्बती समाज की विशेषताओं से संबंधित कार्य प्रपत्र बनाइए—
 - तिब्बत की भौगोलिक स्थिति
 - तिब्बत का रहन—सहन
 - तिब्बत की जलवायु

- (4) तिब्बत का खान-पान
 - (5) तिब्बत की भाषा-बोली
 - (6) तिब्बत का प्राकृतिक सौंदर्य
 - (7) तिब्बत की आर्थिक स्थिति
 - (8) तिब्बत के धार्मिक स्थल
 - (9) कृषि की दशा
 - (10) तिब्बत में कानून व्यवस्था की स्थिति
3. यूँ तो प्राकृतिक आपदा विनाश का दूसरा नाम है, पर यह मनुष्य को अनेक मूल्यों की महत्ता समझा जाती है। कुछ ऐसे ही मूल्यों का उल्लेख कीजिए।
- पत्र-लेखन**
- (1) छात्रावास में रहने वाले अपने छोटे भाई को पत्र लिखकर प्रातःकालीन योग और प्राणायाम का नियमित रूप में अभ्यास करने के लिए प्रेरित कीजिए।
2. अनियमित विद्युत आपूर्ति से उत्पन्न कठिनाइयों का उल्लेख करते हुए विद्युत विभाग के प्रबंधक को पत्र लिखिए-
- पत्र-लेखन**
- (1) समाचार पत्रों की उपयोगिता
 - (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 plan 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

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 developed and presented in the order mentioned before.

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

“We cannot stop natural disasters but we can arm ourselves with knowledge : so many lives wouldn’t have to be lost if there was enough disaster preparedness.” – Petra Nemoova

Social Science Project – Disaster management

Other Subjects – Integrated Project (To be done in a separate file)

Keeping the above statement in mind, prepare a project on Disaster Management as per the following guidelines.

1. Highlight the following :
 - Definition of ‘Disaster’.
 - What is a disaster management cycle?
 - What are the types of Disaster?
 - What is vulnerability and risk?
 - What is a Hazard? How is it classified?
 - Differentiate between hazard and disaster.
 - Contrast and compare physical, chemical and biological hazard. Use the given table as a reference.
2. Complete the following table with the relevant information : (Any one physical, chemical, biological disaster)

Hazard	Elements of the Hazard	Vulnerable groups	Prevention	Examples
Physical				
Chemical				
Biological				

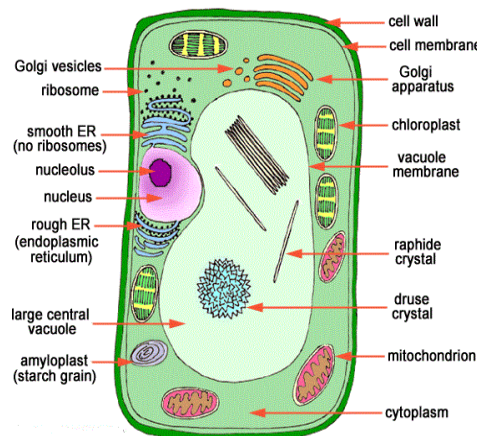
- 3a. Prevention and Mitigation of Common Disasters in India. Select any two for your project.
 - Earthquake
 - Cyclones
 - Flood
 - Drought
 - Landslides
 - Any man-made disaster
- 3b. Based on your selection in Point 3a above, enumerate the following in your project :
 - Meaning
 - Causes
 - Do’s and don’ts
 - Prevention and mitigation measures
 - Your emergency Kit
 - Latest means of forecasting Disasters
 - Prepare a case study on any one of the Disasters that you have chosen to research.
4. Being a young students of TIS, you are familiar with your school building. According to you, what precautions should you take in evacuating from your classroom in case of a Disaster

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

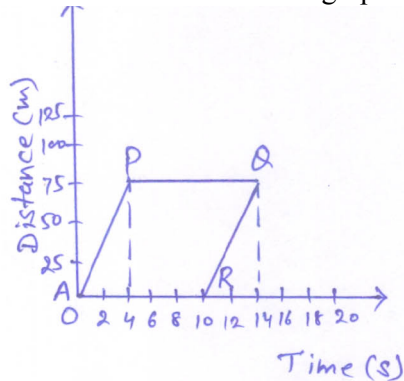
MM : 80

Section - A

- 1) Name the biomolecules present in plasma membrane.
- 2) Name the physical state of matter which can be easily compressed. 1×2=2
- 3) Why is oxygen called a gas? Give two reasons.
- 4) (a) Define uniform circular motion.
 (b) Is the uniform circular motion an accelerated motion? Give reason for your answer.
- 5) Distinguish between prokaryotic and eukaryotic cells. 2×3=6
- 6) How do substances such as CO₂ and H₂O move in and out of the cell?
- 7) How are chromatin, chromatid and chromosome related to each other?
- 8) Briefly describe the structure and functions of cell wall.
- 9) What are lysosomes? How are they formed? Give their functions.
- 10) Write down three basic characteristics of a cell.
- 11) What is the physical state of water at –
 (a) 25°C (b) 0°C (c) 100°C
- 12) Why is ice at 273 K more effective in cooling than water at the same temperature?
- 13) Starting from rest a scooter acquires a velocity of 36 km/h in 10s and then brakes are applied it takes 20s to stop. Calculate acceleration and distance travelled.
- 14) Draw the distance time graph for the following situations :
 (i) when a body is stationary
 (ii) when a body is moving with a uniform speed
 (iii) when a body is moving with non-uniform speed.
- 15) Velocity-time graph for the motion of an object in a straight path is a straight line parallel to the time axis.
 (i) identify the nature of motion of the body
 (ii) find the acceleration of the body.
 (iii) draw the shape of distance-time graph for this type of motion 3×10=30
- 16) On the basis of diagram given below;
 Name the labeled part which
 A) Determine function and development of the cell.
 B) Packages materials coming from the endoplasmic reticulum.
 C) Is a fluid contained inside the nucleus.
 D) Is site for many biochemical reactions necessary to sustain life.



- 17) Give the main points of difference in the three states of matter in the tabular form.
- 18) What is evaporation? Discuss the factors which influence evaporation.
- 19) Differentiate between plant cell and animal cell.
- 20) Define acceleration. State a relationship connecting u , v , a and t for an acceleration motion. Give an example of a motion in which acceleration is uniform.
- 21) The graph given below in the distance time graph of an object



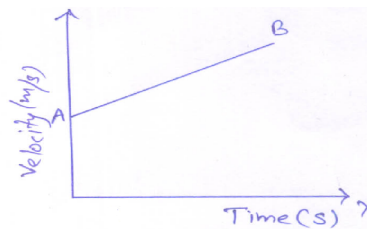
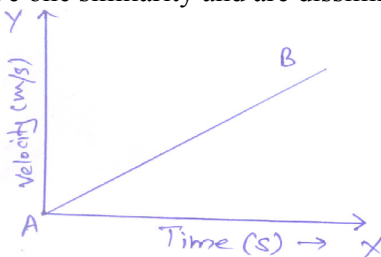
6×5=30

Section - B

- 1) Which of the following is not matter
 - a) fog
 - b) humidity
 - c) melting point
 - d) blood
- 2) The force of attraction between the particles of matter is maximum in
 - a) iron rod
 - b) kerosene oil
 - c) glycerine
 - d) dry air
- 3) Which of the following act as garbage disposal system of the cell?
 - a) golgi apparatus
 - b) lysosomes
 - c) vacuole
- 4) Organelle without a cell membrane is
 - a) ribosome
 - b) nucleus
 - c) mitochondrion
 - d) chloroplast
- 5) A gas can be best liquefied by
 - a) lowering the temeprature
 - b) increasing the temperature
 - c) increasing the pressure
 - d) increasing the pressure and lowering the temperatue
- 6) The standard room temperatur is taken as
 - a) 0⁰C
 - b) 298K
 - c) 273K
 - d) 20⁰C

6×1=6

- 7) Give one similarity and are dissimilarity between the two graphs.



- 8) What is the relation between distance and time :
 - (i) when body is moving with uniform velocity?
 - (ii) When body is moving with varibale velocity?
- 9) Give one example for each of the type of motion when :
 - (i) acceleration is in the direction of motion
 - (ii) acceleration is against the direction of motion.
 - (iii) acceleration is uniform

3×2=6

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

MM : 90

Section-A

- 1 If $x + \frac{1}{x} = 3$, then find the value of $x^2 + \frac{1}{x^2}$
- 2 Rationalise the denominator of $\frac{1}{\sqrt{5} + \sqrt{2}}$
- 3 Find the zeroes of $x^2 - 9$.
- 4 Factorise : $x^2 + \frac{x}{4} - \frac{1}{8}$

4×1=4

Section- B

- 5 Find the value of a, if
$$\frac{3 - \sqrt{5}}{3 + 2\sqrt{5}} = a\sqrt{5} - \frac{19}{11}$$
- 6 Factorise : $\frac{x^3}{8} - 64 - 3x^2 + 24x$
- 7 Find zeroes of the polynomial
 $P(x) = (x-2)^2 - (x+2)^2$.
- 8 Simplify : $7\sqrt{6} - \sqrt{252} - \sqrt{294} + 6\sqrt{7}$
- 9 Factorise : $21x^2 - x - 2$
- 10 Express $1.\overline{124}$ in the form p/q, where p and q are integers and $q \neq 0$.

6×2=12

Section - C

- 11 Express $0.6 + 0.\overline{7} + 0.4\overline{7}$ in the form p/q where p and q are integers and $q \neq 0$.
- 12 Factorise : $5\sqrt{5}x^2 + 20x + 3\sqrt{5}$.
- 13 Rationalise the demonination : $\frac{4\sqrt{3} + 5\sqrt{2}}{\sqrt{48} + \sqrt{18}}$
- 14 Find the value of $27x^3 + 8y^3$ if $3x + 2y = 20$ and $xy = \frac{11}{9}$.
- 15 Prove that : $\left(\frac{5^a}{5^b}\right)^{a+b} \cdot \left(\frac{5^b}{5^c}\right)^{b+c} \cdot \left(\frac{5^c}{5^a}\right)^{c+a} = 1$
- 16 If $a = 2 + \sqrt{3}$, then find $a^2 + \frac{1}{a^2}$
- 17 By using suitable identity, find the product
 $(\sqrt{2a} + \sqrt{3b} + \sqrt{4c}) (2a^2 + 3b^2 + 4c^2 - \sqrt{6} ab - \sqrt{12} bc - \sqrt{8} ca)$
- 18 Factorise : $x^6 - y^6$

- 19 If x and y be two positive real numbers such that $4x^2 + y^2 = 40$ and $xy = 6$ then find the value of $2x + y$.
- 20 Locate the points $P(2,4)$, $Q(4,2)$, $R(4,-3)$, $S(-3,4)$ on the graph paper and join them to recognise the figure.

10×3=30

Section – D

- 21 Three vertices of a square are $P(-1,-9)$, $Q(3,-1)$, $R(-5,3)$. Plot the points. Also find the coordinates of the missing vertex S .
- 22 If $x = \frac{\sqrt{3}+1}{\sqrt{3}-1}$ and $y = \frac{\sqrt{3}-1}{\sqrt{3}+1}$, find $x^2 + xy + y^2$.
- 23 Express $1.3\overline{2} + 0.3\overline{5}$ in the form p/q , where p and q are integers and $q \neq 0$.
- 24 Factorise : $(x^2 - 5x + 6)^2 - (x^2 - 6x + 8)^2$.
- 25 If remainder is same when polynomial $p(x) = x^3 + 8x^2 + 17x + ax$ is divided by $(x+2)$ and $(x+1)$ find the value of a .
- 26 Factorise : $2x^3 - 3x^2 - 17x + 30$.
- 27 Rationalise the denominator : $\frac{1}{\sqrt{7} + \sqrt{6} - \sqrt{13}}$.
- 28 The polynomial $p(x) = x^4 - 2x^3 + 3x^2 - ax + 3a - 7$ when divide by $(x+1)$ leaves the remainder 19. Find the value of a . Also find the remainder when $p(x)$ is divided by $(x+2)$.
- 29 Prove that : $\frac{2^{30} + 2^{29} + 2^{28}}{2^{31} + 2^{30} - 2^{29}} = \frac{7}{10}$.
- 30 If $\frac{7 + \sqrt{5}}{7 - \sqrt{5}} - \frac{7 - \sqrt{5}}{7 + \sqrt{5}} = a + 7\sqrt{5}b$, determine the rational numbers a and b .
- 31 If $x+y+2=1$, $xyz = -1$ and $xy + yz + zx = -1$, find the value of $x^3 + y^3 + z^3$

10×3=30

Answer key-Maths-

- (1) 7 (2) $\frac{\sqrt{5}-\sqrt{2}}{3}$ (3) 3, -3 (4) $\frac{1}{8}(4x-1)(2x+1)$ (5) $a = \frac{9}{11}$
- (6) $\left(\frac{x}{2}-4\right)^3$ (7) 0 (8) 0 (9) $(7x+2)(3x-1)$ (10) $\frac{2122}{999}$
- (11) $\frac{167}{90}$ (12) $(\sqrt{5}x+3)(5x+\sqrt{5})$ (13) $\frac{9+4\sqrt{6}}{15}$ (14) 7560
- (15) (16) 14 (17) $2\sqrt{2}a^3 + 3\sqrt{3}b^3 + 8c^3 - 6\sqrt{6}abc$
- (18) $(x-y)(x+y)(x^2+y^2+xy)(x^2+y^2-xy)$ (19) 8 (20) trapezium
- (21) $S(-9, -5)$ (22) 15 (23) $\frac{553}{330}$ (24) $(x-2)(x-2)(2x-7)$
- (25) $a = 0$ (26) $(x-2)(x+3)(2x-5)$ (27) $\frac{7\sqrt{6}+6\sqrt{7}+\sqrt{546}}{84}$ (28) 5, 62
- (29) (30) $a = 0, b = \frac{1}{11}$ (31) 1

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

MM : 90

SECTION-A

Question numbers 1 to 4 carry one mark each.

1 Simplify: $\left[\frac{7^2 \cdot 4}{4^2 \cdot 2} \right]^{1/4}$

2 Factorise : $x^2 - 24x + 144$.

3 Simplify : $\sqrt[4]{3\sqrt{2^2}}$

4 Factorise : $125x^3 - 1y^3$.

SECTION-B

Question numbers 5 to 10 carry two marks each.

5 Express the rational number $0.\bar{9}$ in the form $\frac{p}{q}$, where p and q are integers and $q \neq 0$.

6 Find the value of k, so that polynomial $x^3 - 13x^2 + 2kx + 23$ has one factor as $x - 13$.

7 Write reflections of the point (1, 2) in x - axis and y - axis.

8 Insert three rational numbers between $\frac{2}{3}$ and $\frac{2}{3}$.

9 If $y = 52$ and $y = 50$ are the zeroes of the polynomial $f(y) = 52y^3 - 25y^2 - 1ay + 1b$, find the values of a and b.

10 Find distances of following points from the y-axis :
 (4, 5), (5, 24), (24, 25) and (25, 4)

SECTION-C

Question numbers 11 to 20 carry three marks each.

11 Locate $5\sqrt{2}$ on the number line.

12 If $\frac{30}{4\sqrt{3} - 1} = 5 + 4\sqrt{3} + a\sqrt{2}$, find the value of a.

13 Evaluate 111^3 , using a suitable identity.

14 If $p^5 = 5 + 2\sqrt{6}$, find $p^2 + \frac{1}{p^2}$

15 Simplify : $\left(x + \frac{2}{5}y\right)^2 - \left(x - \frac{2}{5}y\right)^2$

16 Plot the points (x, y) given in the following table on the cartesian plane, choosing suitable units of distances on the axes :

x	3.5	1.5	4	2.2	2.6	5
y	0	2.35	5	2.7	7	2.1

17 If $3x + 2y = 12$ and $xy = 56$, find the value of $9x^2 + 14y^2$.

18 If $\sqrt{5} = 2.236$ and $\sqrt{3} = 1.732$, find the value of $\frac{2}{\sqrt{5} - 1} + \frac{7}{\sqrt{5} + \sqrt{3}}$

19 Plot three points A(2, 2), B(2, 2) and C(2, 2) on the graph paper. Now, plot point D so that ABCD is a square. Give coordinates of point of intersection of diagonals.

20	If $x^2 = \frac{1}{x} \cdot 53$, then find the value of $x^3 = \frac{1}{x^3}$.	
SECTION-D		
Question numbers 21 to 31 carry four marks each.		
21	If $\frac{9^n \cdot 3^{2n} \cdot \left \frac{3^{2n/2} \right ^2}{3^{3m} \cdot 2^3} = 5 \cdot \frac{1}{27}$, prove that $m=2n+5$.	
22	Show that $x^2 - \sqrt{2}$ is a factor of the polynomial $x^3 - 2\sqrt{2}x^2 - 10x + 12\sqrt{2}$. Hence factorise the polynomial.	
23	Find the quotient and remainder obtained on dividing $p(x) = 54x^4 + 111x^3 + 12x^2 + 211x + 26$ by $q(x) = x^2 + 12x + 12$ and verify remainder by using remainder theorem.	
24	Factorise : $r^3 + (s+2t)^3 + (t+2r)^3 + (r+2s)^3$.	
25	Show that $a^3 + b^3 + c^3 - 3abc = \frac{1}{2} (a+b+c) [(a-b)^2 + (b-c)^2 + (c-a)^2]$	
26	If $a+b+c=0$, then prove that $\frac{(b+c)^2}{3bc} + \frac{(c+a)^2}{3ac} + \frac{(a+b)^2}{3ab} = 5$	
27	Factorise : $x^3 + 13x^2 + 32x + 20$	
28	Divide polynomial $p(x) = 52x^4 + 13x^3 + 22x^2 + 29x + 22$ by $q(x) = 5x^2 + 23$ and find what should be subtracted from $p(x)$ so that it is divisible by $q(x)$.	
29	Show that $(p+1)$ is a factor of both the polynomials $p^{10} + 1$ and $p^{11} + 1$.	
30	If $\frac{\sqrt{a+2b} + \sqrt{a-2b}}{\sqrt{a+2b} - \sqrt{a-2b}}$, prove that $bx^2 - ax + b = 0$	
31	If $x^5 = 24\sqrt{5}$, find $x^2 = \frac{1}{x^2}$ and $x^3 = \frac{1}{x^3}$.	