## SANT NIRANKARI PUBLIC SCHOOL, FARIDABAD SUMMER HOLIDAYS HOMEWORK CLASS X (2022-23)

#### **Dear Parents**

Warm greetings, as you know that vacations are about to come so here are some tips to make your ward's vacation a fruitful and happy period for them. A few suggestions that you may like to keep in mind are :

- Spend quality time with your children. Take them out to outings and have fun time together.
- Help your children to become independent by giving them responsibilities.
- Involve them in small household activities.
- Strengthen good manners, healthy habits and respect for elders.
- Strengthen the feelings of empathy, affection and tolerance.
- Give them a chance to look after you and their younger brothers and sisters.
- Converse with your children in English.
- Encourage your children to read books to enhance their language skills. Reading will also boost their interpretative skills and provide them valuable literary experience.
- Cultivate sportsmanship by encouraging your children to play various indoor and outdoor games
- Remember that Summer Vacation is the time to learn and enjoy. So spend these holidays creating a nurturing and stimulating environment filled with fun, frolic, and learning.
- The homework, duly labeled must be submitted to the class teacher within three days of reopening of school after summer vacation.

School will reopen on 4th July 2022

We wish you happy, healthy and safe summers.

Regards

#### SANT NIRANKARI PUBLIC SCHOOL, FARIDABAD SUMMER VACATION HOMEWORK CLASS X SUBJECT ENGLISH (2022-2023)

#### First Flight:- Ch 4 Diary of Anne Frank

• Learn all the answers.

#### Multiple Assessment:-

- Write about Nazia's dictatorship in France on A4 size sheet
- If you will find yourself at the place of Anne frank How will you tackle the situation write on A4 size sheet in 100 to 150 words

#### <u>Poem</u>

**EBSB:-** 1) Write information of the wild life of Haryana and Telangana with pictures on A4 size sheet. Mention at least 5 wild animals of each state.

2) Prepare an attractive Brochure on Telangana, including their Festivals, Art and Craft, Music, Dance, Food, Visiting Places and Authors. Use A3 Size sheet for this activity.

#### Footprints Without Feet

#### Art Integrated:-

- Design a PPT on the Importance of pets. Questions to be covered in slides are:-
- What types of pets people use to keep at home?
- Why people are excited to keep pets?
- Define Mrs Pumphrey
- Ailments of Tricki and its reasons
- Role of Mr. Herriot
- Theme of the chapter The Triumph of Surgery.

2) Make a poster portraying your thoughts and your point of view on "Love for freedom is the natural instinct of every living being. (relate with poem a tiger in a zoo)

#### Letter Writing: use A4 size sheet

**1.** Write a letter to the editor of an English daily, making a plea to the common people to switch over to solar energy to conserve electricity and limit electricity bills

2. Your grandfather is very upset about the rising prices and keeps thinking of his olden times when things were very cheap. You are convinced that inflation has made life difficult for common man. Write a letter in 100-120 words to the editor of a national daily describing the difficulties faced by poor families.

#### ग्रीष्मावकाश गृहकार्य (22-23) कक्षा - दसवीं विषय - हिंदी

- स्पर्श व संचयन में कराए गए सभी पाठों को ध्यानपूर्वक पढ़िए व उनके प्रश्नोतर याद कीजिए।
- कक्षा में कराए गए समस्त व्याकरण कार्य की पुनरावृति लिखित रूप में कीजिए।
- व्याकरण की पुस्तक में अपठित गद्यांश (पृष्ठ संख्या 27-33) में अभ्यास प्रश्न 1 से 10 तक कीजिए।
- शरीर के अंगों से संबंधित मुहावरे याद कीजिए।
- व्याकरण की पुस्तक में दिए गए प्रार्थना पत्र व शिकायती पत्रों का अभ्यास कीजिए।

#### क्रियाकलाप

- हरियाणा के बड़खल झील व तेलंगाना के नागार्जुन सागर बाँध का चित्र सहित तुलना कीजिए।
- एक पिक्चर एल्बम बनाएँ
   आप अपनी गर्मी की छुट्टियों में जिन-जिन स्थानों पर घूमने जाएँगे , वहाँ पर अपने परिवार के साथ एक अच्छा सा फोटो निकालेंगे तथा उसी फोटो के नीचे उस स्थान से संबंधित जानकारी भी लिखेंगे ।
- 'पर्यावरण संरक्षण' विषय पर एक आकर्षक व सुंदर पोस्टर का निर्माण कीजिए।
   (सभी क्रियाकलापों के लिए ए 4 आकार के कागज़ का प्रयोग करें।)

#### **Mathematics Holiday Homework**

#### Class X Session 2022-23

1.Complete all the assignments attached below and do all of them on A4 sheets and submit after vacations to be kept in your portfolio.

2. Do the following activities: -

a) Prepare Presentations/Videos/Digital Dictionary etc. on basic concepts of Term 1 and use various art forms of Telangana for presentation purpose like borders, images etc.

b) Prepare Ppts on roots of quadratic and cubic polynomials (Ch 2 Polynomials)

#### Share your creations with your teacher before taking printouts for submission.

<u>c</u>) Make Reels/Videos/Songs/Mnemonic etc. on Trigonometric Ratios (Ch 8 Introduction to Trigonometry) and share with your teacher.

d) Prepare 3D Games of Cards/Dice/Coins etc. to find Probability of various Events. Submit your 3D Games with teachers after vacations.

Important: Do daily practice (Min 1 Hour) of basic concepts of Maths and also improve your calculating ability along with revision of Syllabus done in your Class.

In Case you face any Difficulty in practice of concepts you may connect with your teacher.

#### **Assignment Ch 2 Polynomials**

- 1) If p and q are the zeroes of  $2x^2 7x + 3$  then find the value of  $p^2 + q^2$
- 2) A quadratic polynomial  $2x^2 3x + 1$  has zeroes as  $\alpha$  and  $\beta$ . Now form the quadratic polynomial whose zeroes are  $3\alpha$  and  $3\beta$
- 3) Polynomial  $x^4 + 7x^3 + 7x^2 + px + q$  is exactly divisible by  $x^2 + 7x + 12$ , then find the value of p and q.
- 4) If  $\alpha$  and  $\beta$  are the zeroes of  $x^2 + 4x = 3$ , find the polynomial whose zeroes are  $1 + \frac{\beta}{\alpha}$  and  $1 + \frac{\alpha}{\beta}$
- 5) If  $x \sqrt{5}$  is the factor of  $x^3 3\sqrt{5}x^2 5x + 15\sqrt{5}$  then find all zeroes of this polynomial.
- 6) Find all zeroes of  $4x^4 + x^372x^2 18x$ , if two of its zeroes are  $3\sqrt{2}$  and  $-3\sqrt{2}$
- 7) If  $x^3 + 8x^2 + kx + 18$  is divisible by  $x^2 + 6x + 9$  then find the value of k.
- 8) If  $3x^4 9x^3 + x^2 + 15x + k$  is divisible by  $3x^2 5$ , find the value of k and other two zeroes of the polynomial.

- 9) On dividing  $x^3 8x^2 + 20x 10$  by g(x) the quotient and remainder were x-4 and 6 respectively. Find g(x)
- 10) Find all zeroes of  $x^4 17x^2 36x 20$ , if two of its zeroes are 5 and -2.
- 11) Fins all zeroes of  $x^4 3\sqrt{2}x^3 + 3x^2 + 3\sqrt{2}x 4$  if two of its zeroes are  $\sqrt{2}$  and  $2\sqrt{2}$
- 12) Find a quadratic polynomial whose zeroes are  $\frac{3+\sqrt{5}}{5}$  and  $\frac{3-\sqrt{5}}{5}$
- 13) What must be added or subtracted to  $8x^4 + 14x^3 2x^2 + 8x 12$  so that  $4x^2 + 3x 2$  is a factor of p(x)
- 14) For what value of p, (-4) is the zero of  $P(x)=x^2-2x-(7p+3)$
- 15) If  $x^4 + 2x^3 + 8x^2 + 12x + 18$  is divided by another polynomial  $x^2 + 5$ , the remainder is px + q. Find the value of p and q.

#### Assignment Ch 8 Introduction to Trigonometry

Q1. In  $\triangle$  ABC, right angled at B, if AB = 12 cm and BC = 5 cm, find (i) sin A and tan A (ii) sin C and cot C. Q2. Given  $\cot\theta = \frac{20}{21}$  find all other trigonometric ratios. Q3. If  $\cos A = \frac{12}{13}$  verify that:  $\sin \underline{A}(1 - \tan A) = \frac{35}{156}$ . Q4. (i) If  $7 \cot \theta = 24$ , prove that  $\frac{1 - \cos \theta}{1 + \cos \theta} = \frac{1}{1 + \cos \theta}$  (ii) If  $4 \cot \theta = 5$ , show that:  $\frac{5 \sin \theta + 3 \cos \theta}{5 \sin \theta - 2 \cos \theta} = \frac{7}{2}$ . Q6. If  $21 \csc \theta = 29$ , find the value of: (i)  $\frac{\cos^2 \theta - \sin^2 \theta}{1 - 2 \sin^2 \theta}$  (ii)  $\frac{2 \cos^2 \theta - 1}{\cos^2 \theta - \sin^2 \theta}$ Q7. If  $\tan \theta + \frac{1}{\tan \theta} = 2$ ; show that:  $\tan^2 \theta + \frac{1}{\tan^2 \theta} = 2$ . Q8. Evaluate each of the following: (i)  $2 \cos^2 45^\circ + \tan^2 60^\circ - 6 (\sin^2 45^\circ - \tan^2 30^\circ)$ 

Q10. Given that sin (A + B) = sin A cos B + cos A sin B, find the value of  $sin 75^{\circ}$ .

#### Assignment Ch 3 Pair of Linear Equations in One Variable

Q.1: The cost of 2 kg of apples and 1kg of grapes on a day was found to be Rs.160. After a month, the cost of 4 kg of apples and 2 kg of grapes is Rs.300. Represent the situation algebraically.

Q.2: Half the perimeter of a rectangular garden, whose length is 4 m more than its width, is 36 m. Find the dimensions of the garden.

Q.3: On comparing the ratios  $a_1/a_2$ ,  $b_1/b_2$ , and  $c_1/c_2$ , find out whether the following pair of linear equations are consistent, or inconsistent.

(i) 3x + 2y = 5 ; 2x - 3y = 7

(ii) 2x - 3y = 8 ; 4x - 6y = 9

Q.4: Solve the following pair of linear equations by the substitution method.

(i) x + y = 14 x - y = 4(ii) 3x - y = 39x - 3y = 9

Q.5: Solve 2x + 3y = 11 and 2x - 4y = -24 and hence find the value of 'm' for which y = mx + 3.

Q.6: The coach of a cricket team buys 7 bats and 6 balls for Rs.3800. Later, she buys 3 bats and 5 balls for Rs.1750. Find the cost of each bat and each ball.

Q.7: A fraction becomes 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 5/6. Find the fraction.

Q.8 Form the pair of linear equations in the following problems, and find their solutions (if they exist) by the elimination method:

(i) Five years ago, Nuri was thrice as old as Sonu. Ten years later, Nuri will be twice as old as Sonu. How old are Nuri and Sonu?

(ii) A lending library has a fixed charge for the first three days and an additional charge for each day thereafter. Saritha paid Rs.27 for a book kept for seven days, while Susy paid Rs.21 for the book she kept for five days. Find the fixed charge and the charge for each extra day.

Q.9: Solve the following pair of linear equations by the substitution mathod: 8x + 5y = 93x + 2y = 4

Q.10: Formulate the following problem as a pair of equations, and hence find their solutions:

(i) Ritu can row downstream 20 km in 2 hours, and upstream 4 km in 2 hours. Find her speed of rowing in still water and the speed of the current.

Q.11: Solve the equations x + 2y - 4 = 0 and 2x + 4y - 12 = 0 graphically.

Q.12: Find the value(s) of k so that the pair of equations x + 2y = 5 and 3x + ky + 15 = 0 has a unique solution.

Q.13: Determine graphically the coordinates of vertices of a triangle, the equation of whose sides are given by 2y - x = 8, 5y - x = 14 and y - 2x = 1.

Q.14: Use elimination method to find all possible solutions of the following pair of linear equation:

2x + 3y = 8

4x + 6y = 7

Q.15: Solve the following pairs of equations by reducing them to a pair of linear equations:

1/2x + 1/3y = 2

1/3x + 1/2y = 13/6

#### Assignment Ch 1 Number System

Q1. State Fundamental Theorem of Arithmetic and Explain what are Composite Numbers with example.

Q.2: Express each number as a product of its prime factors:

- (i) 140
- (ii) 156

(iii) 3825 (iv) 5005 (v) 7429

Q.3: Given that HCF (306, 657) = 9, find LCM (306, 657).

Q.4: Prove that  $3 + 2\sqrt{5}$  is irrational.

Q.5: Without actually performing the long division, state whether the following rational numbers will have a terminating decimal expansion or a non-terminating repeating decimal expansion:(i) 13/3125 (ii) 17/8 (iii) 64/455 (iv) 15/1600

Q.6: The following real numbers have decimal expansions as given below. In each case, decide whether they are rational or not. If they are rational, and of the form, p/q what can you say about the prime factors of q?

(i) 43.123456789

(ii) 0.120120012000120000...

Q.7: Check whether 6<sup>n</sup> can end with the digit 0 for any natural number n.

Q.8: What is the HCF of the smallest prime number and the smallest composite number?

Q.9: Using Euclid's Algorithm, find the HCF of 2048 and 960.

Q.10: Find HCF and LCM of 404 and 96 and verify that HCF × LCM = Product of the two given numbers.

#### **Assignment Ch 7 Coordinate Geometry**

Q. 1: Find the distance of the point P (2, 3) from the x-axis.

Q. 2: Find a relation between x and y such that the point (x, y) is equidistant from the points (7, 1) and (3, 5).

Q. 3: Find the coordinates of the points of trisection (i.e., points dividing into three equal parts) of the line segment joining the points A(2, -2) and B(-7, 4).

Q. 4: Find the ratio in which the line segment joining the points (-3, 10) and (6, -8) is divided by (-1, 6).

Q. 5: Find the value of k if the points A(2, 3), B(4, k) and C(6, -3) are collinear.

Q. 6: Find the area of the triangle formed by joining the mid-points of the sides of the triangle whose vertices are (0, -1), (2, 1) and (0, 3). Find the ratio of this area to the area of the given triangle.

Q. 7: Name the type of triangle formed by the points A (-5, 6), B (-4, -2) and C (7, 5).

Q.8: Find the area of triangle PQR formed by the points P(-5, 7), Q(-4, -5) and R(4, 5).

Q.9: If the point C(-1, 2) divides internally the line segment joining A(2, 5) and B(x, y) in the ratio 3:4, find the coordinates of B.

Q.10: Find the ratio in which the line x - 3y = 0 divides the line segment joining the points (-2, -5) and (6, 3). Find the coordinates of the point of intersection.

Q.11: Write the coordinates of a point on the x-axis which is equidistant from points A(-2, 0) and B(6, 0).

Q.12: If A(-2, 1), B(a, 0), C(4, b) and D(1, 2) are the vertices of a parallelogram ABCD, find the values of a and b. Hence, find the lengths of its sides.

Q.13: If A(-5, 7), B(-4, -5), C(-1, -6) and D(4, 5) are the vertices of a quadrilateral, find the area of the quadrilateral ABCD.

Q.14: Find the ratio in which P(4, m) divides the line segment joining the points A(2, 3) and B(6, -3). Hence, find m.

Q.15: Find the distance of a point P(x, y) from the origin.

#### Assignment Ch 12 Area Related to Circles

- 1. A calf is tied with a rope of length 6 m at the corner of a square grassy lawn of side 20 m. If the length of the rope is increased by 5.5m, find the increase in the area of the grassy lawn in which the calf can graze.
- 2. Find the radius of a circle whose circumference is equal to the sum of the circumferences of two circles of radii 15 cm and 18 cm.
- 3. In the given figure, ABC is a quadrant of a circle of radius 14 cm and a semicircle is drawn with BC as diameter. Find the area of the shaded (in yellow colour) region.



- 4. Find the area of the minor segment of a circle of radius 14 cm, when the angle of the corresponding sector is 60°.
- 5. If the difference between the circumference and the radius of a circle is 37 cm, then using  $\pi$  = 22/7, calculate the circumference (in cm) of the circle.
- 6. The length of the minute hand of a clock is 14 cm. Find the area swept by the minute hand in 5 minutes.
- 7. A pipe of wire 22 cm long is bent into the form of an arc of a circle subtending an angle of 60° at its centre. Find the radius of the circle. [use  $\pi = 22/7$ ]
- 8. Find the area of the shaded region in the figure, where arcs are drawn with centres A, B, C and D intersect in pairs at midpoints P, Q, R and S of the sides AB, BC, CD and DA respectively of a square ABCD of side 12 cm. [use  $\pi$  = 3.14]



9. Three semicircles each of diameter 3 cm, a circle of diameter 4.5 cm and a semicircle of radius 4.5 cm are drawn in the given figure. Find the area of the shaded region.



10. In the figure, a square OABC is inscribed in a quadrant OPBQ. If OA = 15 cm, find the area of the shaded region. (use  $\pi$  = 3.14)



#### SANT NIRANKARI PUBLIC SCHOOL, FARIDABAD

CLASS X (SESSION 2022-23)

#### SUBJECT: SCIENCE

#### SCIENCE HOMEWORK

1 Learn Chapters 1,6, and 10 thoroughly.

#### 2. Do two assignments of chapters 6 and 10

#### 3.Do EBSB ACTIVITY:

**A)** Different types of soil, forests and wild animals found in Telangana and Haryana.

#### 4.ART INTEGRATED ACTIVITIES OF SCIENCE

1. 1. Make a Toy with P.O. P (chapter- 2 Acid, Bases and Salt)

#### **POTTERY( ART)**

2. Make a Project on Light by using ICT (Chapter- 10- light)

#### **5.SUBJECT ENRICHMENT ACTIVITIES**: Write down following

experiments in practical notebook. Experiment 5. Determination of focal length of (i) Concave mirror (ii) Convex lens Experiment 6- (A) Finding the pH of samples by using Ph paper. (b) Studying the properties of Acids and Bases. Experiment 7- Tracing the path of rays of light through a glass prism.

#### ASSIGNMENT 1. TOPIC- TRANSPORTATION AND EXCRETION

#### **Very Short questions**

a. Name the artery which carries de-oxygenated blood.

b. Name the plant tissue which transports water & minerals

c. Name the plant tissues which transports food from leaves to different parts of plants

d. Aquatic animals like fishes excrete body wastes as \_

e. Animals like snakes excrete semi-solid white coloured compound called

f. What is the average heartbeat of an adult human?

g. Name the instrument which is used by doctor to measure rate of heart beat

h. Name the vein which carries oxygenated blood

i. Name the chamber of heart which receives de-oxygenated blood from whole body

j. Name the chamber of heart which pumps oxygenated blood to whole body

k. Name the process of cleaning the blood of a person by separating the toxic waste products using artificial kidney machine

I. Name the instrument that helps to measure blood pressure.

m. What is the main filtration unit in kidney?

#### Short Answer question:

Give reasons

1.Valves are present in veins.

2. Arteries have thick & elastic muscular wall.

3. Left ventricle has thicker wall than right ventricle.

4. White patches are formed on our clothes in summer.

(5) Explain excretory system in humans. Draw a well labelled diagram.

(6) Describe the function of blood platelets.

#### ASSIGNMENT-2 TOPIC-LIGHT

1. With respect to air the refractive index of ice is 1.31 and that of rock salt is 1.54. calculate the refractive index of rock salt with respect to ice?

2. Three mirrors, one plane, one concave and one convex are lying on the table. How can a person identify them without touching them or using any other apparatus or device?

3. The refractive index of some medium are given below: Crown glass- 1.52
Water- 1.33
Sapphire- 1.77
In which of the medium is the speed of light

(ii)maximum
(ii)minimum

(iii) Calculate speed of light in sapphire.

4. An convex mirror used on a bus has a focal length of 200 cm. it a scooter is located at 100 cm. from this mirror find the position, nature and magnification of the image formed in the mirror.

5. An object is kept at a distance of 15cm from a (1) convex mirror (2) concave lens (3) Plane mirror. The focal length of the convex mirror and the concave lens are 10 cm each. Draw the appropriate ray diagrams, showing the formation of image, is each of the three cases.

6. Find the position, nature and size of the image formed by a convex lens of focal length 12 cm of an object 5 cm high placed at a distance 20 cm from it.

7. A 4.5 cm needle is placed 12 cm away from a convex mirror of focal length 15 cm. Give the location of image and magnification.

8. A 5cm tall object is placed perpendicular to the principal axis of a convex lens of focal length 10 cm. The distance of the object from the lens is 15 cm. Find the nature, position and size of the image. Also find its magnification.

9. A 10 cm tall object is placed perpendicular to the principal axis of a convex lens of focal length 30 cm. The distance of the object from the lens is 20 cm. Find the:
(a)Position
(b)Nature
(c)Size of the image formed

10. A 6 cm object is placed perpendicular to the principal axis of a convex lens of focal length 15 cm. The distance of the object from the lens is 10 cm. Find the position, size and nature of the image formed

#### SANT NIRANKARI PUBLIC SCHOOL, SECTOR-16 A, FARIDABAD CLASS- 10, SUBJECT- SOCIAL SCIENCE SESSION- 2022-2023

#### A. Prepare a project file with following details:

1. The total length of the project report should not be more than 15 written pages (A-4 size) sheet.

2. The project report should be handwritten and credit will be awarded to original drawings,

illustrations and creative use of eco-friendly material.

3. The project should be presented in a neatly bound simple folder.

- 4. The project should be developed and presented in this order
- a) Cover page showing project title, student information, school and year.
- b) List of contents with page numbers.
- c) Certificate page
- d) Acknowledgements (acknowledging the institution, offices and libraries visited and

persons who have helped).

- e) Chapters with relevant headings.
- f) Summary and conclusions based on findings.
- g) Bibliography: should have the Title, author, publisher and if a website the name of

the website with the specific website link which has been used.

#### Any one topic of the following:-

**Political Science – Social Issues-** The project should include – a) Meaning b) Effects on society c) Case study on the topic (Child Labour, Begging, Gender division, Racism, Acid Attack Victims, Corruption, and Nepotism)

**Economics – Consumer Awareness-** The project should include – a) Consumer Rights b) Consumer Duties c) Case study on the topic

Sustainable Development in the context of Economic and Geological Development

#### B. Learn all the following chapters:

1.a. The Rise of Nationalism in Europe b. Nationalism in India

- 2.a. Power Sharing b. Federalism
- 3.a. Resources and Development b. Agriculture

4.a. Development b. Sectors of the Indian Economy

C. Take help from your NCERT Geography/History book and prepare a small handy map book.

### D. Make your Portfolio Folder with cartridge/handmade sheet & EBSB File using your creativity

#### E. Do the following activities:-

**History:** - 1. Find out more about nationalist symbols in any two countries outside europe. And for two countries collect examples of pictures, posters or music that are symbols of nationalism. How are these different from europeon examples? Do it on a4 sheet.

2. Write an article on Freedom Fighters of Telangana- Alluri Sita Ram Raju & Anabheri Prabhakar Rao

**Political Science: - 1.** Write a brief sketch on the bullet Lady of Telangana- Mallu Swarajyam

2. Draw a flow chart of composition of Belgium and Sri Lanka on A4 sheet

3. State the various dialects of India and the people's percentage speaking it. Refer pg.22

**Economics: - 1.** Take five Indian neighbouring countries and compare their GDP, birth rate and literacy rate. Do it on A4 sheet

2. What does the comparison between 1970-71 and 2010-11 show? What conclusions can we draw from the comparison? Refer pg. No. 24 And do it on A4 sheet.

Geography: - 1. Draw the chart of classification of resources on A4 sheet. Refer pg. 1

2. Mark the Multipurpose Projects on the political map of India; Make a collage of flora and fauna

3. Mark the places where the following crops grown:-Rice,Wheat.Cotton,Jute,Tea,Coffee

4. Prepare a poster on save water

# ΧΙΤ

1. Visit a place where computer is used and make your field work file.

- 2.Do assignments shared in class group and keep them in portfolio.
- 3.Complete your practical file.

4.Complete questions-answers of chapter – communication skills and digital documentations.

## **Drawing HHW**

- 1. Complete Page No 100, 102, 103, 107, 110, 111, 112 on A3 Sheet.
- 2. Make a Poster on Stop Terrorism (Page No 90) on A3 Sheet
- 3. Make a Border for Display Board using waste material.