

**SANT NIRANKARI PUBLIC SCHOOL, FARIDABAD
CLASS X (2019-20) HOLIDAYS HOMEWORK**

English

A. Create a Literary Newspaper (1 cartridge sheet folded twice so that there are 4 sides)

Page 1: Describe the following in 500 words each with illustrations.

- (i) Apartheid (ii) Holocaust

Page 2: Description of an event (250 words each)

- (i) Lok Sabha Elections (ii) International Mother Earth Day

Page 3: Article (150 words each)

- (i) Social Media and Youth (ii) Qualitative Education vs Quantitative Education
(iii) Coping with stress (iv) Role of youth in making new India

Page 4: Story Writing on any one of the following: (250 words each)

Prompts:

- (i) You answer the door-bell only to find an intricate envelope on the ground – an invitation.
(ii) John was up for a big promotion in his company. He had put everything on hold for it, including his love life. But an outsider is hired and
(iii) They didn't mean to, but in an attempt to build a time travelling machine, they discovered an alternate universe, and were accidentally trapped there.
(iv) Jack and his friends take a boat trip to a tiny, vacant, off-limit island for a night of celebration. When the sun goes down, they realize just how occupied the island actually is and there's a reason it's off-limits.

B. Make your Portfolio Folder with cartridge/handmade sheet .

C. Read any newspaper in English and write down five (Two international news, two national news and one sports news headlines) on every Saturday and Sunday.

D. Practice full grammar at the back of literature book 'First Flight' and make a file with various examples.

E. Learn the syllabus covered in April and May.

F. Read all the chapters covered in the class of 'First Flight' and 'Footprints without feet'. **ASSIGNMENT (to be done on ruled sheets)**

Writing Section

A. Article

1. People in metro cities face the problem of stray animals. A few heartily want them to be fed, given shelter, loved but some show cruelty towards these speechless creatures. Write an article on how we can tackle this problem.
2. You are Rita/Ravi of class X. Write an article on 'India of my vision'.

B. Story Writing

3. Write a short story in 150 – 200 words on the basis of the hints provided:
One day a dog found a piece of meat. He reached the bank of the river.
4. Write a short story in 150 – 200 words on the basis of the hints provided:
Last week I went to market on bicycle to buy some books. I placed my bicycle outside the shop.....

C. Letter to Editor

5. You are Ankit/Anupama, a resident of A-20, Tilak Nagar, New Delhi. You are deeply troubled by the sale of alcohol to underage people. Write a letter to the Editor of the "The Hindustan Times" drawing attention to this problem.

6. Public park is the heart of a residential area. Children play, elders go for a walk and even ladies do yoga and other exercises there. But unfortunately the park in your area has become a place for stray animals and anti-social elements. Write a letter to the Editor of The Hindu, K G Marg New Delhi, to draw attention of the civic authorities towards it.

D. Formal letter of Enquiry

7. You are interested in a short-term course in computer graphics during the holidays. Write a letter to the Director, Fortune Graphics Computers, inquiring about their short-term courses and asking for all the necessary details. You are Anuj/Anju of 28 A, Uttam Nagar, New Delhi.

8. You are John/Urmila, the Tour Incharge of Grant Public School, Agra. During the summer break, you are planning to organize a tour to a place of historical importance. Write a letter to The National Travel agency, Agra enquiring about the charges, facilities and all the other necessary details.

E. Formal letter of Placing order

9. Write a letter to Delhi Sports, New Delhi, placing an order for sports articles to be supplied to your school, Sign as Ravi/Raveena, Sports Secretary.

10. You are Smriti, Librarian of S.M. Public school, Kolkata. Write a letter to the Sales Manager of Usha Publications Limited, Kolkata placing an order for the books that you wish to purchase for your school library. Also ask for the discount permissible on the purchase.

F. Formal letter of Complaint

11. You are the Physical Education Instructor at St. Jesus and Mary School, Agra. You had placed order for sports goods with Student Sports Enterprises. When the items arrived you found that some of them were defective. Write a letter to the Manager, Student Sports Enterprises, asking him to replace the defective items.

12. You had bought a mobile phone from a reputable showroom in Mumbai but after a month it developed a serious fault. Write a complaint letter to the manager asking for immediate repair or replacement of the same. You are Sadiq/Razia, 123, TT Nagar, Bhopal.

Literature

BOOK-1(FIRST FLIGHT)

A Letter to god

Short Answer

1. What was the effect of the rain on the crops?
2. What are the raindrops compared to and why?

Long Answer

1. Describe the character of Lencho in the light of his faith and attitude towards God and man.
2. Why did Lencho call the post office employees' a bunch of crook?
3. What does it show about his attitude towards man?

Nelson Mandela: long walk to freedom

Short Answer

1. What was the pledge taken by Nelson Mandela?
2. What were the two anthems seen on 'that day'?
3. What did being free mean to Mandela as a boy, and as a student? How does he contrast these 'transiting freedoms' with; the basic and honorable freedoms?

Long Answer

1. Nelson Mandela point out same human qualities in his speech. Which of these of these questions impresses you the most?

Two stories about flying

His first flight

Short Answer

1. When did the seagull get over his fear of the water?
2. Do you sympathize with the seagull? Give reasons.

Long Answer

1. Fear and lack of confidence stop one from learning new things. Do you agree? How did these two traits of the young seagull make him coward? How did he overcome these shortcomings?

The Black Aeroplane

Short Answer

1. How many fuel tank were there in the plane? How much fuel was left?
2. Why did the pilot fly straight into the storm instead of returning to Paris?

Long Answer

1. Do you think the story 'the black Aeroplane' is a mystery? Do you see some elements of supernatural power in the story?

From the Diary of Anne Frank

Short Answer

- 1 Who brought Anne " a birthday present" and why?
2. Why did Anne think that she was alone? Give reasons.

Long Answer

1. Write a brief character sketch of Anne. How does she impress you? What will you learn you learn from her?
2. What idea do you form of Mr Keesing as a teacher? What is that you like most about him?

Poetry

Dust of Snow

Short Answer

1. Explain the imagery used by the poet.

Extract based questions

Has given my heart

A Change of mood

And Saved Part

Of a day I had rued.

- (a) What type of mood was the poet in?
- (b) How did the poet's mood change?
- (c) Which word in the stanza means regret?
- (d) What is the rhyming scheme of the poem?

Short Answer

1. Explain the imager used by poet.

Long Answer

1. How can you say that the nature has a significant role in the lives of humans?

Fire and Ice

Extract based questions

But if it had to perish twice,

I think I know toughly hate

TO Say that for destruction ice

Is also great

And would suffice.

- (a) What dose Ice stands for?
- (b) What could be the cause for destruction?
- (c) Which word in the stanza stands for destruction?
- (d) What, according the poet, would bring an end to the world?

Short Answer.

1. Why does the poet hold with those who favor fire?

Long Answer

1. Briefly write about the ideas about how the world will end.

A Tiger in the zoo

Extract based questions.

But he's lock in a concrete cell,

His strength behind bars,

Stalking the lengths of his cage,

Ignoring visitors.

(a) Why is he locked in a concrete cell?

(b) Pick out the word from the stanza that means opposite of recognize.

(c) Who are the visitors?

(d) What does the animal do?

Short Answer

1. How does a tiger create terror for the villagers?

Long Answer.

1. Why should the tiger snarl around houses at the edge of the forest?

How to tell wild Animals.

Extract based questions.

Or if some time when roaming round,

A noble wild beast greets you,

With Black stripes on a yellow ground,

Just notice it he lets you.

This simple rule may help you learn

The Bengal tiger to discern.

(a) Why does the poet call him a noble animal?

(b) How is Bengal tiger different from the other animals?

(c) Pick out the word from the stanza that means the same as animal.

(d) Name the poem and poet.

Short Answer

1. How is the Bengal tiger described?

Long Answer

1. What is the famous saying associated with crocodiles and what does it mean?

Footprints Without feet.

A triumph of Surgery.

Short Answer

1. Why did Mr Herriot inspect a call from Mrs Pumphrey?

2. Why was it tempting to keep trickle in surgery as a permanent guest?

Long Answer

1. Give a brief character sketch of Mrs Pumphrey.

2. With a brief character sketch of Mr Herriot, the veterinary surgeon. What impresses you the most in him?

The Thief's story

Short Answer.

1. Why did Hari singh feel that writing book was a quiet way to make a living?

2. Why did Anil forgive Hari Singh ?

Long Answer

1. Give a brief character sketch of Anil lighting his qualities.

The Midnight Visitor

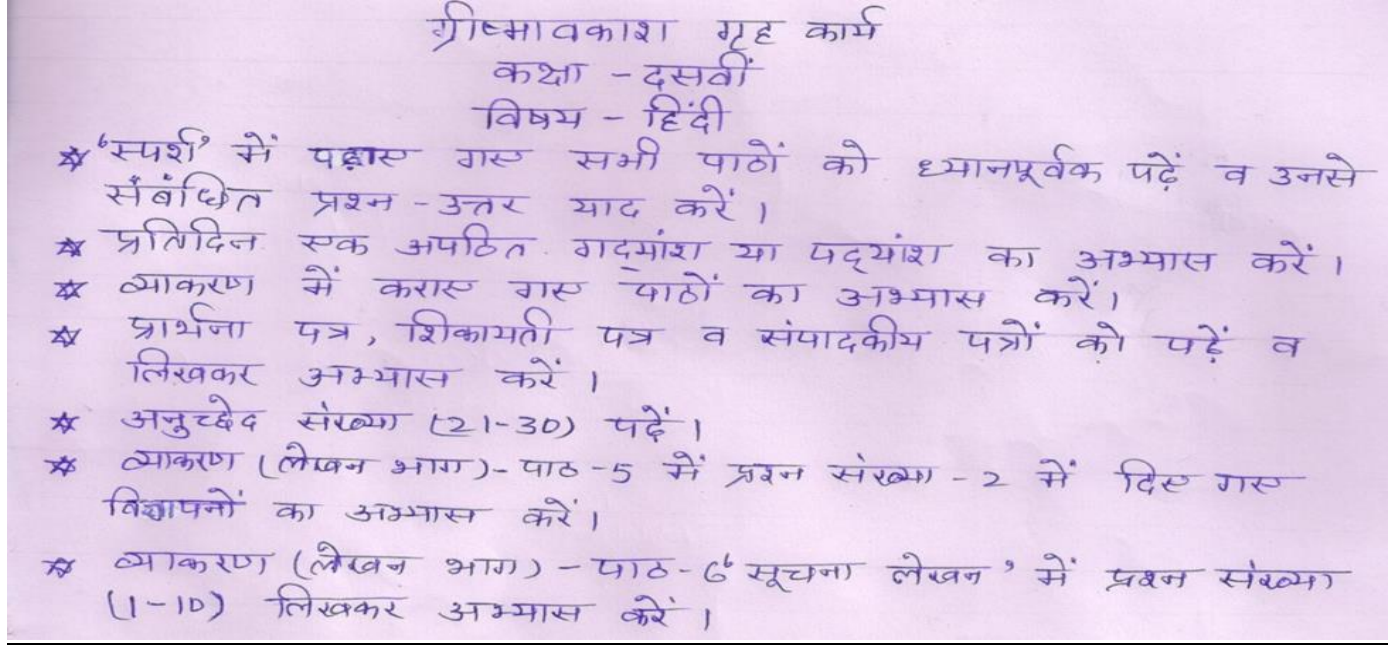
Short Answer

1. Who was Henry? What role did he play in Ausable's plans?
2. What story did Ausable fabricate about the balcony?

Long Answer

1. Give a brief character sketch of Fowler?

Hindi



MATHEMATICS

Chapter 1 - Number System

1. Use Euclid's division algorithm to find the HCF of 1288 and 575.
Ans. 23.
2. Check whether $5 \times 3 \times 11 + 11$ and $5 \times 7 + 7 \times 3 + 3$ are composite number and justify.
Ans. Composite number.
3. Check whether 6^n can end with the digit 0, where n is any natural number.
Ans. No, 6^n can not end with the digit 0.
4. Given that $\text{LCM}(26, 169) = 338$, write $\text{HCF}(26, 169)$.
Ans. 13
5. Find the HCF and LCM of 6, 72 and 120 using the prime factorization method.
Ans. HCF = 6
LCM = 360

Chapter 2 - Polynomials

1. Form a cubic polynomial with zeroes 3, 2 and -1.
Hints/Ans. $p(x) = x^3 - (\alpha + \beta + \gamma)x^2 + (\alpha\beta + \beta\gamma + \gamma\alpha)x - \alpha\beta\gamma$
2. Find the zeroes of the quadratic polynomial $6x^2 - 3 - 7x$ and verify the relationship between the zeroes and the coefficients.
Ans. Zeroes are $3/2$ & $-1/3$.
3. For what value of k, (-4) is a zero of polynomial $x^2 - x - (2k + 2)$?
Ans. $k=9$
4. Give an example of polynomials $p(x), g(x), q(x)$ and $r(x)$ which satisfy division algorithm and $\text{deg. } p(x) = \text{deg. } g(x)$.
Ans. $3x^2 + 2x + 1, x^2, 3, 2x + 1$
5. Find the zeroes of $4u^2 + 8u$.
Ans. 0, -2
6. Find a quadratic polynomial, whose the sum and product of its zeroes are $\frac{1}{4}, -1$.
Ans. $x^2 - \frac{1}{4}x - 1$

Chapter 3 - Pair of linear equations in two variables

1. Draw the graphs of the equations

$$4x - y = 4$$

$$4x + y = 12$$

Determine the vertices of the triangle formed by the lines representing these equations and the x-axis. Shade the triangular region so formed

Ans: (2,4)(1,0)(3,0)

2. Solve Graphically

$$x - y = -1 \text{ and}$$

$$3x + 2y = 12$$

Calculate the area bounded by these lines and the x-axis,

Ans: $x = 2, y = 3$ and area = 7.5 unit^2

3. Solve :- $\frac{10}{x+y} + \frac{2}{x-y} = 4$

4. Ritu can row downstream 20 km in 2 hr, and upstream 4 km in 2 hr. find her speed of rowing in still water and the speed of the current. (HOTS)

Ans: Speed of the rowing in still water = 6 km/hr

Speed of the current = 4 km/hr.

5. In a ΔABC , $\angle C = 3^\circ, \angle B = 2(\angle A + \angle B)$ find these angles. (HOTS)

Ans: $\angle a = 20^\circ, \angle b = 40^\circ, \angle c = 120^\circ$.

6. 8 men and 12 boys can finish a piece of work in 10 days while 6 men and 8 boys can finish it in 14 days. Find the time taken by 1 man alone and that by one boy alone to finish the work. (HOTS)

Ans: One man can finish work in 140 days

One boy can finish work in 280 days

7. Find the value of K for which the system of linear equations $2x+5y = 3, (k+1)x + 2(k+2)y = 2K$ will have infinite number of solutions.

(HOTS)

Ans: $K = 3$

Chapter 4 - Quadratic Equations

1. If $x = 2$ and $x = 3$ are roots of the equation $3x^2 - 2kx + 2m = 0$ find the value of k and m .
Ans. $k = \frac{15}{2}, m = 9$
2. Solve the equation:
$$\frac{x}{x+1} + \frac{x+1}{x} = \frac{34}{15}, x \neq 0, x \neq -1$$

Ans. $x = \frac{3}{2}$ or $x = \frac{-5}{2}$
3. Solve the equation $2x^2 - 5x + 3 = 0$ by the method of completing square.
Ans. $x = \frac{3}{2}$ or $x = 1$
4. Using quadratic formula, solve the equation: $p^2x^2 + (p^2 - q^2)x - q^2 = 0$.
Ans. $x = -1$, or $x = \frac{q^2}{p^2}$
5. The sum of two numbers is 15, if the sum of their reciprocals is $\frac{3}{10}$, find the numbers.

Chapter 7 - Co-ordinate Geometry

1. Show that the points $(3, 2)$, $(0, 5)$, $(-3, 2)$ and $(0, -1)$ are the vertices of a square.
2. Point P divides the line segment joining the points $A(2, 1)$ and $B(5, -8)$ such that $AP:AB=1:3$. If P lies on the line $2x - y + k = 0$, then find the value of k .
Ans. $k = -8$
3. Points $P, Q, R,$ and S in that order are dividing a line segment joining $A(2, 6)$ and $B(7, -4)$ in five equal parts. Find the coordinates of point P and R ?
Ans. $P(3, 4), R(5, 0)$
4. Find a relation between x and y if the points $(2, 1)$, (x, y) and $(7, 5)$ are collinear.
Ans. $4x - 5y + 3 = 0$
5. If $A(-4, -2)$, $B(-3, -5)$, $C(3, -2)$ and $D(2, 3)$ are the vertices of a quadrilateral, then find the area of the quadrilateral.
Ans. 28 sq. units
6. Find the values of x for which the distance between the points $P(2, -3)$ and $Q(x, 5)$ is 10 units
Ans. $x = 8$ or $x = -4$
7. Find the point on y -axis which is equidistant from the points $(5, -2)$ and $(-3, 2)$
Ans. $(0, -2)$

Chapter 8 - Introduction to Trigonometry

1. If θ and $3\theta-30^\circ$ are acute angles such that $\sin\theta=\cos(3\theta-30^\circ)$, then find the value of $\tan\theta$.
Ans. $\frac{1}{\sqrt{3}}$
2. Find the value of $\frac{(\cos 30^\circ + \sin 60^\circ)}{(1 + \cos 60^\circ + \sin 30^\circ)}$
Ans. $2\sqrt{3}$
3. Find the value of $(\sin\theta + \cos\theta)^2 + (\cos\theta - \sin\theta)^2$
Ans. 2
4. If $\tan\theta = \frac{3}{4}$ then find the value of $\cos^2\theta - \sin^2\theta$
Ans. $\frac{7}{25}$
5. If $\sec\theta + \tan\theta = p$, then find the value of $\sec\theta - \tan\theta$
Ans. $\frac{1}{p}$
6. change $\sec^4\theta - \sec^2\theta$ in terms of $\tan\theta$.
Ans. $\tan^4\theta + \tan^2\theta$
7. If $\cot\theta = 1/\sqrt{3}$ then find the value of $(1 - \cos^2\theta)/(1 + \cos^2\theta)$
Ans. $\frac{3}{5}$
8. If $\cot\theta + \frac{1}{\cot\theta} = 2$ then find the value of $\cot^2\theta + \frac{1}{\cot^2\theta}$.
Ans. 2
9. If $\sin\theta = a/b$, then find the value of $\sec\theta + \tan\theta$
Ans. $\sqrt{\frac{b+a}{b-a}}$
10. If $\cos x = \cos 60^\circ \cos 30^\circ + \sin 60^\circ \sin 30^\circ$, then find the value of x
Ans. 30°
11. If $0^\circ \leq x \leq 90^\circ$ and $2\sin^2x = 1/2$, then find the value of x
Ans. 30°
12. Find the value of $\operatorname{cosec}^2 30^\circ - \sin^2 45^\circ - \sec^2 60^\circ$
Ans. -2
13. Simplify $(\sec\theta + \tan\theta)(1 - \sin\theta)$
Ans. $\cos\theta$

Chapter 15 - Probability

1. Cards bearing numbers 3, 5,, 35 are kept in a bag. A card is drawn at random from the bag. Find the probability of getting a card bearing (a) a prime number less than 15 (b) a number divisible by 3 and 5.
[Ans. $\frac{5}{17}, \frac{2}{17}$]
2. Two dice are thrown at the same time. Find the probability of getting (a) same no. on the both side (b) different no. on both sides.
[Ans. $\frac{1}{6}, \frac{5}{6}$]
3. A child game has 8 triangles of which three are blue and rest are red and ten squares of which six are blue and rest are red. One piece is lost at random. Find the probability of that is (a) A square (b) A triangle of red colour.
[Ans. $\frac{5}{9}, \frac{5}{18}$]
4. Two dice are thrown simultaneously. What is the probability that:
(a) 5 will not come up either of them? (b) 5 will come up on at least one? (c) 5 will come at both dice?
[Ans. $\frac{25}{36}, \frac{11}{36}, \frac{1}{36}$]
5. The king, queen and jack of clubs are removed from a deck of 52 playing cards and remaining cards are shuffled. A card is drawn from the remaining cards. Find the probability of getting a card of (a) heart (b) queen (c) clubs
[Ans. $\frac{13}{49}, \frac{3}{49}, \frac{10}{49}$]
6. A game consist of tossing a one-rupee coin 3 times and noting its outcome each time. Hanif wins if all the tosses give the same result, i.e., 3 heads or three tails and loses otherwise. Calculate the probability that hanif will lose the game.
[Ans. $\frac{3}{4}$]
7. Cards bearing numbers 1, 3, 5,, 37 are kept in a bag. A card is drawn at random from the bag. Find the probability of getting a card bearing
(a) a prime number less than 15
[Ans. $\frac{5}{19}$]
(b) a number divisible by 3 and 5.
[Ans. $\frac{2}{19}$]

*Do above assignments in a separate notebook and also practice above chapters from NCERT.

Social Science

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

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

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. Practice all maps of Geography & History in File.

D. Make your Portfolio Folder with cartridge/handmade sheet

E. Do the following assignment in ruled sheets

HISTORY & CIVICS

1. Describe the militant guerrilla movement of Andhra Pradesh.
2. Explain the Inland Emigration Act of 1859? How plantation workers of Assam reacted to Non-Cooperation call or how they saw the Swaraj ?
3. List out any four limitations of the CDM of 1930.
4. i. Name the person who designed the Swaraj Flag. What were the features of this flag? How was it used as a symbol of defiance? ii. Write a short note on ' The Interpretation of History' and 'folklores'.
5. i. Mention the proposed stages of NCM according to Mahatma Gandhi.
ii. How the NCM started in towns and cities? Explain its economic effects also.
6. i. Various classes and groups of Indians participated in the CDM for different reasons. Explain the reason for all the classes to participate in the movement.
ii. "Nationalism spreads when people begin to believe that they are all part of the same nation." Justify the statement.
7. Define power sharing & majoritarianism. Describe the majoritarian measures taken by the leaders of the Sinhala community to establish their supremacy.
8. Distinguish between prudential and moral reasons of power sharing in a tabular form.
9. What are the different forms of power-sharing in modern democracies? Give an example of each of these.
10. "India is a federal country". Comment on the statement.
11. i. Distinguish between a federal form of government and a unitary one. Explain with example. ii. Differentiate between "Coming together Federation" and "Holding Together Federation"
12. Describe the three-fold distribution of legislative powers between the Union Government and the State Government.

GEOGRAPHY & ECONOMICS

- 13 How can we solve the problem of land degradation? Suggest any three measures.
- 14 What is resource planning? Why is the planning of sources essential? Explain any two reasons...
- 15 what type of soils is found in the river deltas of the Eastern coast? Give three main features of this type of soil.
- 16 What was the purpose of the Earth Summit held in Rio de Janeiro in 1992? What are the main provisions of Agenda 21 signed at this Summit?
- 17 In what respect is the criterion used by UNDP for measuring development different from the one used by the World bank?
- 18 What is the main criterion used by the World Bank in classifying different countries? What are the limitations of this criterion?
- 19 What is Sustainable development? Suggest the ways in which resources can be used judiciously.
- 20 "While average income is useful for comparison but it may hide disparities." Discuss.
- 21 "Workers are exploited in the unorganized sector." Do you agree with this view? Give reasons in support of your answer.
22. Why is tertiary sector becoming so important in India? Explain with reasons.
23. Distinguish between organized and unorganized sector by stating any five points of distinction.
24. What is GDP? Which agency fulfils the task of measuring GDP in India? Explain how it measures GDP.
25. What is underemployment? Suggest any three ways to tackle disguised unemployed/underemployment workers in India.

Science

1. Learn Chapter 1,2,6,7,12,13,14,15
2. Write down the experiment number 1 to 8 in your practical notebook.
3. Do following assignments in separate notebook.

Assignment 1

Chemistry

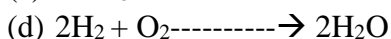
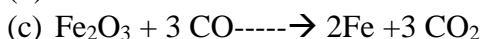
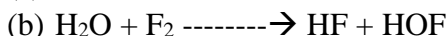
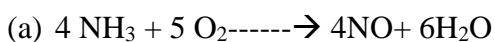
Q1. Why do we store silver chloride in dark coloured bottles?

Q2. Why do fire flies at night?

Q3. Why do silver articles turn black when kept in open for a few days? Name the phenomenon involved. Name the black substance formed and give its chemical formula.

Q4. A substance X, which is an oxide and used in cement factory. This element is present in bones also. On treatment with water it forms a solution which turns red litmus to blue. Identify X and also write down the reactions.

Q5. Identify the reducing agent in the following reactions



Q6. A solution of potassium chloride when mixed with silver nitrate solution, an insoluble white substance is formed. Write the chemical reaction involved and also mention the type of chemical reaction.

Q7. 2 g ferrous sulphate crystals are heated in a dry boiling tube.

(a) List two observations.

(b) Name the type of chemical reaction

(c) Write the balanced chemical reaction and name the products.

Q8. You have noted that when copper powder is heated in a china dish, the reddish brown surface of copper powder coated with a black substance.

(a) Why this black substance formed and name the black substance.

(b) Write the chemical equation of the reaction and how the black coating on the surface can be turned reddish brown.

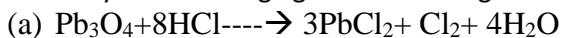
Q9. On heating a white powder of Lead nitrate in a boiling tube, lead oxide (yellow), oxygen gas and brown gas X is formed. (a) Identify the brown gas evolved. (b) Write the chemical equation. (c) Identify the type of reaction. (d) What will be the behaviour of aqueous solution of the gas X.

Q10. What happens when a piece of silver metal is added to copper sulphate solution? Write the balanced equation.

Q11. What happens when zinc granules are treated with dilute solution of HCl, H₂SO₄, HNO₃,

NaCl, NaOH. Write down the reactions.

Q12. Identify the oxidising agent in following reactions.



- (b) $2 \text{Mg} + \text{O}_2 \rightarrow 2\text{MgO}$
 (c) $\text{V}_2\text{O}_5 + 5\text{Ca} \rightarrow 2\text{V} + 5 \text{CaO}$
 (d) $\text{CuO} + \text{H}_2 \rightarrow \text{Cu} + \text{H}_2\text{O}$
 (e) $3 \text{Fe} + 4\text{H}_2\text{O} \rightarrow \text{Fe}_3\text{O}_4 + 4 \text{H}_2$

- Q13. An aluminium can was used to store ferrous sulphate solution. It is observed that in few days holes appeared in the can. Explain the observation and write chemical equation.
 Q14. List any three observations that determine when a chemical reaction has taken place. Also list three informations that cannot be obtained about a chemical reaction, merely by its chemical equation.
 Q15. When potassium iodide soln. is added to a soln. Of lead nitrate in a test tube, a precipitate is formed.

What is colour of the precipitate and name the precipitated formed. Write down the reaction.

PHYSICS

- Three resistors of 1ohm, 2ohmand 3 ohm are connected in parallel in a circuit. If 1 ohm resistor draw a current of 1 A, find the current through the other two resistors.
- A wire of length 1 metre and radius 0.02 cm. has resistance of 5.0 ohms. Calculate the resistivity of the material of the wire.
- The resistance per metre length of a wire is 10 ohm. If the resistivity of the material of the wire is 50×10^{-8} ohm metre, find the area of cross section of the wire.
- Derive an expression for the equivalent resistance of three resistors connected in (1) series (2) parallel.
- Calculate the amount of heat generated while transferring 90000 coulombs of charge between the two terminals of a battery of 40 V in one hour. Also determine the power expended in the process.
- An electric heater draws a current of 10A from 220 V supply. What will be the cost of using the heater for 5 hours every day for 30 days if the cost of 1 unit (1 kWh) is Rs. 5.20?
- Two bulbs A and B are rated as 90 W-120 V and 60W- 120 V respectively. They are connected in parallel across a 120 V SOURCE. Find the current in each bulb. Which bulb will consume more energy?
- An electric lamp is marked 25 W, 220 V. It is used for 10 hours daily. Calculate (1) its resistance while glowing (2) Energy consumed per day (3) cost of using it at the rate of Rs. 5 for 30 days.
- (a) Derive an expression for Joule's law of heating.
 (c) (b) Give two examples for application for Joule's law of heating.
 (d) 10. State Ohm's Law. Prove it graphically and experimentally.
- Write the major hazard of nuclear power generation.
- Name any two nutrients that spent slurry has in the biogas plant.
- List advantages of using the following energy (a) nuclear energy (b) wind energy (c) solar energy.
- Write the relation between resistance and electrical resistivity of material of a conductor. Derive the S.I.unit of electrical resistivity.
- "Biogas is an excellent fuel." List four reasons to justify the statement.
- What is a dam? List two main advantages and two ill effects of constructing dam?

Biology

- Differentiate between blood and lymph.
- List some important functions of kidneys.
- How do unicellular organisms generally remove waste?
- Name the factors on which the amount of water reabsorbed along the tubular part of nephron depend on?

5. Nervous and hormonal systems together perform the function of control and co-ordination in human beings. Justify.

6. What is a food chain? Why is the flow of energy in an ecosystem unidirectional? Explain.
7. Explain why plants have low energy needs as compared to animals.
8. Why does the flow of signals in a synapse from axonal end of one neuron to dendritic end of another Neuron take place but not in the reverse direction? Explain.
9. Generally, we clean natural ponds or lakes but an aquarium needs periodic cleaning. Why?
10. List two differences between reflex action and walking.
11. Write down two differences between pepsin and trypsin.
12. List in tabular form three distinguishing features between cerebrum and cerebellum.
13. List four functions of the human heart. Why is double circulation necessary in the human body?
14. Draw the labelled diagram of
 - Digestive system in human beings.
 - Respiratory system in human beings
 - Excretory system in human beings
 - Human brain
 - Human heart and its parts

ASSIGNMENT 2

1. What is a neutralization reaction?
2. How is the small intestine designed to absorb digested food?
3. How do auxins promote the growth of a tendril around a support?
4. Why is parallel arrangements used in domestic wire
5. Why is damage to the ozone layer a cause for concern?
6. What is geothermal energy?
7. Describe the experiment to show hydrotropism.
8. What are the limitations of extracting energy from the wind and tides?
9. Define corrosion? Why copper vessels being cleaned with lemon or tamarind?
10. What are trophic levels? Give an example of food chain and state different trophic levels in it..
11. a) How are fats digested in our bodies?
 b) How are the alveoli designed to maximize the exchange of gases
 c) What is the role of saliva in digestion of food?

12. Why is the amount of gas collected in one of the test tubes double of the amount collected in the other in electrolysis of water experiment? Name this gas.

13. Draw the structure of a neuron and explain its function.

14. What is (1) the highest , (2) the lowest total resistance that can be secured by combination of four coil of resistance 4 ohm, 8 ohm, 12 ohm , 24 ohm.

15. Explain the mechanism of reflex action and draw reflex path.

16. In some plants stomata opens at night. Give example of such plants. Explain giving reason the unusual behavior of these plants.

17. Explain giving any three reasons the significance of transpiration in plants

18. Define hormone. Write four characteristics of hormone in humans.

19. Name the disorder caused by the following situations:

- (i) Under secretion of growth hormone
- (ii) Over secretion of growth hormone
- (iii) Under secretion of insulin
- (iv) Deficiency of iodine

20. How is the movement of leaves of the sensitive plants different from the movement of a shoot towards light?

Information Technology

1. What is Bandwidth?
2. What is the purpose of using HTTPS in the URL address?
3. Write a short note on WI-FI.
4. What are the two types of Instant Messaging?
5. Compare and Contrast LAN and WAN.
6. What are the different disabilities that affect computer usage?
7. What are cookies in Computer System used for?
8. Write down the steps to create a Skype Id?
9. In which Situation we prefer Star topology over Ring topology?
10. What are the advantages of Bus Topology?
11. Define the terms :
 - a. E-Ticketing
 - b. Blog address
 - c. Windows Defender
12. Who has developed
 - a. Facebook
 - b. WhatsApp
 - c. Blogs
 - d. Youtube

Q.2) Complete book assignments of Chapters 2, 3 & 4.

Q.3) With permission of your parents, do project work (field work) of any computer organization as explained in the class.