SERVICE BEFORE SELF

# SALWAN PUBLIC SCHOOL

**Sector-15 (II), Gurgaon**

## *Holiday Home Work*

**(2017-18)**

# CLASS – X

# English

Dear Students

Summer vacations are here! A respite from soaring temperature and scorching sun! It’s a welcome break.

To keep your palate full and brain cells tingling, exciting and interesting assignments have been compiled to keep you engaged with constructive activities.

The activities have been designed to enrich and enhance literary skills and aid in progressive learning.

**THE STORY OF MY LIFE- By HELEN KELLER**
**Chapters 1- 14 (Term-1)**

**Instructions:**

Please note that the Novel – The Story of My Life, has been initiated in the class.

Answer the following questions in about 80 - 100 words. Write the answers along with the questions in your literature notebook. Please mention the correct chapter and question number.

**Last Date of Submission: July 10, 2017**

**Chapter – 1**

Q1. What was that thing that the writer could not forget all her life despite losing her vision and hearing power?

Q2. Why does the writer say that 'there's no king who has had no slave among his ancestors, and no slave who has had no king among his ancestors'?

**Chapter – 2**

Q3. Why could Helen not make her dog, Belle, a good friend of hers as Martha was despite her best efforts?

Q4. What difference did Helen notice in the communication of her mother with her aunt, whenever it took place, and with what results?

**Chapter – 3**

Q5. What was the importance of 'American Notes' to both the writer and her parents?

Q6. 'Dr Alexander Graham Bell served as a beacon light to the parents of the writer and the writer herself'. Justify the remark.

**Chapter – 4**

Q7. How did the introduction of the concept of the word 'water' awaken the writer's soul?

Q8. Why did the writer for the first time in her life long for a new day to arrive?

**Chapter – 5**

Q9. Who would you credit for the restoration of the writer's love for Nature, the teacher or the writer herself? Justify.

**Chapter – 6**

Q10. "Physical handicap, however severe it may be, cannot hold an inquisitive learner for long from acquiring the highest amount of excellence in any discipline of life'. In the light of this remark, give the academic progress of Helen.

**Chapter – 7**

Q11. Out of all the subjects taught to Helen, which one did she find to be the most uninteresting? How did the teacher teach this subject?

**Chapter – 8**

Q12. There couldn't have been a better gift than a canary for Helen. Comment.

**Chapter – 9**

Q13. Write in about 100 – 120 words character sketch of Mr. William Endicott as a friend.

**Chapter – 10**

Q14. What was the contribution of the big book called 'Our World' to the education of the writer?

**Questions based on Characters**

Q19. Write in about 100 – 120 words character sketch of Mr. Anagnos of Perkins Institution for the Blind.

Q21. Write in about 100 – 120 words character sketch of Miss Sarah Fuller, Principal of the Horace Mann School.

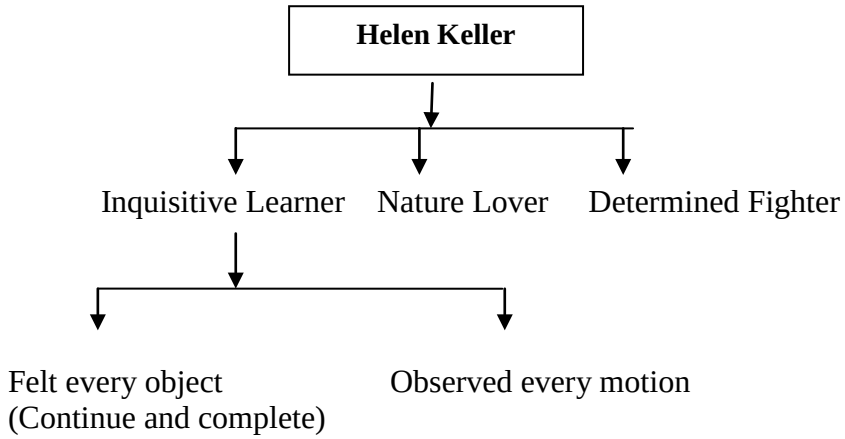
**Project Based Learning (PBL)**

**Note: The following questions should be done in the Literature Notebooks. Only Handwritten. NO Printouts**

Depict development of the following characters on the basis of the inputs given below and your understanding of the text. You may use Illustrations / Web-Chart / Graphic Organizer / Flow Chart.

- **Miss Anne Sullivan**
  As a friend, guide, philosopher……

- **Helen Keller**
  As an inquisitive learner, nature lover, determined fighter……
  For Example:



# हिन्दी

**निर्देशः निम्नलिखित कार्य व्याकरण की नोटबुक में करेंः**

**संवाद लेखन**

**1** आपने कुछ दिन पहले जापान की यात्रा की है, वहाँ पर आपने बुलेट ट्रेन की सवारी की है। बुलेट ट्रेन के विषय पर दो मित्रोम् के बीच संवाद को लिखिए।

**2** शहर में आए दिन होने वाली सड़क दुर्घनाओं से बचकर रहने के बारे में पिता पुत्र के बीच संवाद लिखिए।

**औपचारिक पत्र**

**1** विज्ञान की प्रयोगशाल में कार्य करते हुए आपसे एक जार टूट गया और आप पर **1000** रूपए का जुर्माना लगाया गया था।कारण बताते हुए जुर्माना माफ किए जाने हेतु अपने प्रधानाचार्य को पत्र लिखिए।

**अनुच्छेद लेखन**

**1** मनोरंजन के आधुनिक साधन

**2** मन के हारे हार है मन के जीते जीत

**सूचना लेखन**

**1** अपने विद्यालय के साहित्य सचिव की ओर से निर्धारित तिथि तक वाद–विवाद प्रतियेगिता के लिए नाम देने की सूचना लिखिए।

**2** सूचना एवं प्रसारन मंत्रालय , भारत सरकार द्वारा 'स्वच्छ भारत' विषय पर विज्ञापन आमंत्रित किए जाने हेतु सूचना लिखिए।

# संस्कृत

व्याकरण पुस्तक 'संस्कृत संदर्शिका' पृष्ठ संख्या **21** से **23** पर दिये गये पांच पत्र लेखन तथा पृष्ठ संख्या **25** से **27** में दिए गए पांच चित्रों पर दस–दस वाक्य लिखिए ।

# French

**Objective type questions to be done in the Workbook itself and subjective type questions in the notebook.**

**Name of the Book –** Get Ready Practice Book

**Section A: Compréhension Ecrite**

Compréhension 1- Compréhension 16

**Section B: Expression Ecrite**

- Les Messages – Pages 58,59
- Page 60-Q1 to Q9
- Les Recettes – Pages 61 to 63
- Les Dialogues – Pages 64 and 65
- Les Lettres – Pages 66 to 68

**Section C: Grammaire**

- Pages 78 to 89
- Pages 93 to 109
- Pages 114 to 119
- Pages 123 to 133
- Pages 140 to 154
- Pages 158 to 163

**Section D: Littérature**

- Chapter 1 to Chapter 4

# Japanese

**Homework to be done in Japanese Notebook.**

**Exercise Book**

Chapter 14 :

もんだい Section C : Q4, 5, 6, 7

Chapter 15

れんしゆう Section B : Q4, 5, 6

Section C: Q1,2, 3

もんだい Section C: Q3, 4, 5

Chapter 16:

よんでください

100語でかいてください

あなたの夏休み(なつやすみ)

Explore Japanese Art of paper

切り紙 (きりがみ)

# Maths

**Instruction:** The holiday Homework is to be done in Assignment Register.

**1 Mark Questions**

1) Find a quadratic polynomial, the sum and product of whose zeroes are – 7 and –2.
2) If the system of equations $5x + ky = -1$ and $x + 2y = 3$ is inconsistent then find the value of k.
3) The course of an enemy submarine is plotted on a set of rectangular axes given by the equation $2x + 3y = 5$. On the same axes, the course of a destroyer is indicated by $x–y = 10$. Find the point (x, y) at which submarine can be destroyed.
4) If one root of the quadratic equation $2x^2 – 3x + p = 0$ is 3, find the other root of the quadratic equation. Find the value of p.
5) Determine the value of k for which the quadratic equation $4x^2 – 3kx + 1 = 0$ has equal roots.
6) If m and n are the roots of the equation, $x^2 – mx + n = 0$ then find the value of 'm' and 'n'.
7) If $\Delta$ ABC is right angled at C, then find the value of cos (A+B).
8) If $\sec^2 \alpha (1 + \sin \alpha) (1 – \sin \alpha) = k$, then find the value of k.
9) Find the angle of elevation of the sun when the length of the shadow of a pole is equal to the height of the pole.
10) A number x is chosen at random from the numbers -3,-2,-1, 0,1,2,3 find the probability that $|x| < 2$ .

**2 Mark Questions**

1) Find all the zeroes of the polynomial $x^3 + 3x^2 – 2x – 6$, if two of its zeroes are $-\sqrt{2}$ and $\sqrt{2}$.
2) A and B each have a certain number of mangoes. A says to B, "If you give 30 of your mangoes I will have twice as many as left with you". B replies, "If you give me 10, I will have thrice as many as left with you". Represent the situation algebraically?
3) If $7 \sin^2 \theta + 3 \cos^2 \theta = 4$, find the value of $\sqrt{3} \tan \theta$
4) At a point on level ground, the angle of elevation of a vertical tower is found to be such that its tangent is $\frac{5}{12}$. On walking 192 metres towards the tower, the tangent of the angle of elevation is $\frac{3}{4}$. Find the height of the tower.
5) If a number x is chosen from the numbers 1, 2, 3 & a number y is selected from the numbers 1, 4, 9. Then, find P ($x y < 9$).
6) What is the probability that a leap year selected at random will contain 53 Sundays and 53 Mondays?

7) From the letters of the word "MOBILE", a letter is selected. Find the probability that the letter is a vowel.
8) A bag contains 35 ball of which 'x' balls are red, 'y' balls are white and 5 are black balls. 1 ball is drawn from the bag. Find the probability that it is not black.
9) If $\sin 4A = \cos(A - 20^0)$, where A is an acute angle, find the value of A.
10) Evaluate $\tan 10^0 \tan 15^0 \tan 75^0 \tan 80^0$

**3 Mark Questions**

1) If $\alpha$ & $\beta$ are the zeros of the polynomial $F(x) = x^2 - 5x + k$ such that $\alpha - \beta = 1$, find the value of k.'
2) A group consists of 12 honest people and 8 dishonest people .Write a quadratic polynomial whose roots are equal to number of honest people and number of dishonest people. Which value do you prefer?
3) Determine the value of k for which the following system of linear equations has Infinite number of solutions: $(k - 3)x + 3y = k$, $k x + k y = 12$.
4) A piece of cloth costs Rs. 200. If the piece were 5m longer and each metre of cloth costs Rs.2 less, the cost of the piece would have remained unchanged. How long is the piece and what is its original rate per metre?
5) Evaluate:

$$\cos(40^\circ - \theta) - \sin(50^\circ + \theta) + \frac{\cos^2 40^\circ + \cos^2 50^\circ}{\sin^2 40^\circ + \sin^2 50^\circ} - \frac{\cos 55^\circ \cos ec 35^\circ}{\tan 5^\circ \tan 25^\circ \tan 45^\circ \tan 65^\circ \tan 85^\circ}$$

6) If $\operatorname{cosec}\theta - \sin\theta = a$ and $\sec\theta - \cos\theta = b$, prove that $a^2 b^2 (a^2 + b^2 + 3) = 1$
7) The angle of elevation of the top of a tower as observed from a point in a horizontal plane through the foot of the tower is 30°. When the observer moves towards the tower a distance of 100 m, he finds the angle of elevation of the top to be 60°. Find the height of the tower and the distance of first position from the tower.
8) A man on the top of a bamboo pole observes that the angles of depression of the base and the top of another pole are 60° and 30° respectively. If the second pole stands 5m above the ground level, then find the height of the bamboo on which the man is sitting.
9) A man standing on the deck of a ship which is 10 m above water level, observes the angle of elevation of the top of a hill as 60° and the angle of depression of the base of the hill as 30°. Calculate the distance of the hill from the ship and the height of the hill.
10) In a school campus, there are 25 students who drive car, 20 students ride on motorbike and remaining students' ride on a bicycle. If there are 100 students and a student is selected at random, find the probability that a student drives a car. Which mode of transport should be encouraged in college campus and why?
11) A three digit number is made using the digits 1, 3, 4 (without repetition of digits). If a number among them is selected at random, what is the probability that the number will be (a) Even (b) Odd (c) End with zero. (d) Multiple of 3.
12) In a class of 50 students, there are 27 girls and 23 boys. Eighteen are 'A' students, and ten of these students are girls. If a student is chosen at random, what is the probability of

    a) Choosing a girl

b) Choosing a non 'A' student

c) Choosing a boy student who is a 'A' student?

13) Cards marked with the numbers 2 to 151 are placed in the box and mixed thoroughly. One card is drawn from this box. Find the probability that the number on the card is

a) An odd number

b) A number, which is a perfect square.

c) A prime number less than 75.

14) If $x \sin^3 \theta + y \cos^3 \theta = \sin \theta \cos \theta$ and $x \sin \theta = y \cos \theta$, prove $x^2 + y^2 = 1$.

15) Solve for x and y: $71x + 37y = 253$; $37x + 71y = 287$

16) Solve for x and y

$$\frac{ax}{b} - \frac{by}{a} = a + b \text{ and } \qquad ax - by = 2ab$$

**17)** In a triangle ABC, right-angled at B, in which AB = 12 cm and BC = 5cm. Find the value of cosA, cosecA, cosC and cosecC.

**18)** Given that sin (A + B) = sin A cos B + cos A sin B, find the value of sin 75°.

**19)** If $\cos\theta = 0.6$,show that $(5\sin\theta - 3\cos\theta) = 0$

**20)** Simplify the following expressions:

(i) $(1 + \cos \theta)(\text{cosec } \theta - \cot \theta)$

(ii) $\text{cosec } \theta (1 + \cos \theta)(\text{cosec } \theta - \cot \theta)$

**4 Mark Questions**

1) Find the values of a and b so that $x^4 + x^3 + 8x^2 + ax - b$ is divisible by $x^2 + 1$ .

2) What must be added to the polynomial $p(x) = x^4 + 2x^3 - 2x^2 + x - 1$, so that the resulting polynomial is exactly divisible $x^2 + 2x - 3$? The teacher asked the class to do this question. You are the first one to show your solution to the teacher as your answer is correct,the teacher ask you to check the solution of your classmate .Are you punished or encouraged by the teacher?

3) If 3 is one of the zero of the polynomial $x^3 - 12x^2 + 47x - 60$ and the remaining two zeroes are the number of plants, planted by the two students then

i. Find the total number of plants, planted by both the students.

ii. What value is reflected in this question?

4) If three times the larger of the two numbers is divided by the smaller, then the quotient is 4 and the remainder is 5. If 6 times the smaller is divided by the larger, the quotient is 4 and the remainder is 2. Find the numbers

5) Draw the graphs of the pair of equations: $x + 2y = 5$ and $2x - 3y = -4$ Also find the points where the lines meet the x-axis.

6) A part of monthly expenses of a family is constant and the remaining varies with the price of wheat. When the rate of wheat is Rs 250 a quintal, the total monthly expenses of the family is Rs 1000 and when it is Rs 240 a quintal, the total monthly expenses is Rs 980. Find the total monthly expenses of the family when the cost of wheat is Rs 350 a quintal.

7) A man found some passengers stranded at the station who had lost their belongings and had nothing to eat , he wished to give Rs 12 to each passenger and found that he felt short of Rs 6 to each passenger when he wanted to give all the passengers present. Therefore he distributed Rs 9 to each passenger and found that Rs 9 were left over .how much money did he have and how many passengers were there? What value (s) do you notice in the action of this man?

8) Mrs. & Mr. Rana weighs x kg & y kg respectively. They both take course in diet and nutrition, at the end of which Mr. Rana loses 5kg and weighed as much as his wife weighed before the course. Mrs. Rana loses 4kg and weighs 7/8 of what her husband weighed before the course. Form two equations in x & y and hence find their weighs before taking the course in diet and nutrition. What value is reflected in the action taken by Mrs. & Mr. Rana?

9) Solve for x: $\frac{1}{a+b+x} = \frac{1}{a} + \frac{1}{b} + \frac{1}{x}$ ;a ≠ 0, b ≠ 0, x ≠ 0

10) In a cricket match against Sri Lanka, Sehwag took one wicket less than twice the number of wickets taken by Unmukt. If the product of the number of wickets taken by these two is 15, find the number of wickets taken by each.

11) While boarding an airplane, a passenger got hurt .The pilot showing promptness and concern, made arrangements to hospitalize the injured and so the plane left 30 minutes later than the scheduled time. In order to reach the destination 1500 km away in time, pilot has to increase the speed by 250 km/h from its usual speed. Find its usual speed. Do you appreciate the values shown by the pilot, namely promptness in providing help to injured and his effort to reach in time?

12) A rectangular field is 16 m long and 10 m wide. There is a path of uniform width all around it, having an area of 120 sq. m. Find the width of the path.

13) Show that :

$$\frac{1}{\sec x - \tan x} - \frac{1}{\cos x} = \frac{1}{\cos x} - \frac{1}{\sec x + \tan x}.$$

14) . Show that :

$$2\sec^2\theta - \sec^4\theta - 2\cos ec^2\theta + \cos ec^4\theta = \cot^4\theta - \tan^4\theta.$$

15) Show that:

$$\frac{(1+\cot A+\tan A)(\sin A-\cos A)}{\sec^3 A-\cos ec^3 A} = \sin A^2 \cos^2 A$$

16) If punctuality and regularity are two measurable quantities which are numerically equal to A and B respectively such that

$\sin(A - B) = \frac{1}{2}$

$\cos(A+B) = \frac{1}{2}$ where $0 \leq A+B \leq 90^{\circ}$

then find A and B.

Which one more value other than punctuality & regularity, would you like to adopt in your life?

17) In order to celebrate independence day Raman wishes to fix a flagstaff of height 5m on the top of his house roof .The angle of elevation of the top of the flagstaff as observed from a point A on the ground is 60° and the angle of depression of point A from the top of the roof is 45°.Find the height of the roof. What value is depicted by this act of Raman.

18) A fire in a building 'B' is reported on telephone in two fire stations P and Q, 20 km apart from each other on a straight road. P observes that the fire is at an, angle of 60° to the road, and Q observes, that it is at an angle of 45° to the road. Which station should send its team and how much distance will this team has to travel? What value is depicted from the problem?

19) A shopkeeper while making a lot of 200 pens, deliberately mixed 35 pen with minor defects and 15 pens with major defects in the lot. If a pen is randomly selected from the lot then :

a) What is the probability of the pen having minor defect?

b) What is the probability of the pen having no defect?

c) What is the probability of the pen having major defect?

d) Do you think that the action of shopkeeper is justified, why/why not?

20) In a particular locality it was found that 60 % people uses Cloth bags to buy grocery items, 30 % people uses Paper bags and rest uses Polythene bags. If one person is selected at random from the locality what is the probability that the person selected will be using

a) A cloth bag

b) A polythene bag

c) A paper bag

d) In your opinion which is the best practice among the three category and why?

# Sample Paper

## Mathematics

**Max Marks:80** **Time:3 hours**

**Section A: Q. No 1 To 6 Carry 1 Mark Each**

1. Find the sun's altitude when the length of shadow is same as height of the pole.
2. If $\tan\theta = \frac{1}{\sqrt{3}}$, find the value of $\sin(90° - \theta)$.
3. Find a quadratic polynomial, the sum and product of whose zeroes are – 7 and –2.
4. If the system of equations $5x + ky = -1$ and $x + 2y = 3$ is inconsistent then find the value of k.
5. Find the nature of roots of the equation $3\sqrt{3}\ x^2 + 10x + \sqrt{3} = 0$.
6. Aarushi sold 100 lottery tickets in which 5 tickets carry prizes. If Priya purchased a ticket, what is the probability of Priya winning a prize?

**Section B: Q. No 7 To 12 Carries 2 Marks Each**

7.For what value of k, will the system of equations

$x + 2y = 5$

$3x + ky - 15 = 0$ has a unique solution.

8. If $7\sin^2\theta + 3\cos^2\theta = 4$, find the value of $\sqrt{3}\tan\theta$
9. For what value of *k*, the quadratic equation $2kx^2 - 40x + 25 = 0$ has equal roots ? Find the roots.
10. If $x = a\sec\theta + b\tan\theta$ and $y = a\tan\theta + b\sec\theta$, prove that $x^2 - y^2 = a^2 - b^2$
11. Solve for x and y:

    $px + qy = p - q$

    $qx - py = p + q$
12. A card is drawn from a well shuffled deck of 52 playing cards. Find the probability that the drawn is (a) a king or red (b) a club or black.

**Section C: Question No 13 To 22 Carries 3 Marks Each.**

13. Find the roots of the equation: $5x^2 - 6x - 2 = 0$ by the method of completing the square.
14. Evaluate:

$$\cos(40^\circ - \theta) - \sin(50^\circ + \theta) + \frac{\cos^2 40^\circ + \cos^2 50^\circ}{\sin^2 40^\circ + \sin^2 50^\circ} - \frac{\cos 55^\circ \cos ec 35^\circ}{\tan 5^\circ \tan 25^\circ \tan 45^\circ \tan 65^\circ \tan 85^\circ}$$

15. Find the quotient and remainder when $4x^3 + 2x^2 + 5x - 6$ is divided by $2x^2 + 3x + 1$.

16. The horizontal distance between two trees of different heights is 60 m. The angle of depression of the first tree when seen from the top of the second tree is 45°. If the height of the second tree is 80 m, find the height of the first tree.

17. Prove the following: $\sqrt{\frac{\sec\theta - 1}{\sec\theta + 1}} + \sqrt{\frac{\sec\theta + 1}{\sec\theta - 1}} = 2 \operatorname{cosec}\theta$.

18. Find the value of k for which the quadratic equation $(4 - k)x^2 + (2k + 4)x + (8k + 1) = 0$ has real and equal roots.

19. In a particular society it was found that out of 150 houses 25 were using solar lights, 75 were using LED lights, and 20 were using CFL's while the rest were using fluorescent bulbs for lightings. If one house is selected at random from the society then what is the probability that the selected house is using

| | |
|---|---|
| a) LED Lights<br>b) Fluorescent bulbs. | c) Suggest a few measures to conserve electricity. |

20. Draw the graphs of the pair of equations: $x + 2y = 5$ and $2x - 3y = -4$

    Also find the points where the lines meet the x-axis.

21. Two pipes running together can fill a cistern in $3\frac{1}{13}$ minutes. If one pipe takes 3 minutes more the other to fill the cistern, find the time in which each pipe would fill the cistern.

22. In a game, the entry fee is Rs 5. The game consists of a tossing a coin 3 times. If one or two heads show, Sweta gets her entry fee back. If she throws 3 heads, she receives double the entry fees. Otherwise she will lose. For tossing a coin three times, find the probability that she
    (i) loses the entry fee.
    (ii) gets double entry fee.
    (iii) just gets her entry fee.

**Section D: Question No 23 To 30 Carry 4 Marks Each.**

23. The string of a kite is 45 m long. It makes an angle θ with the level ground such that $\sin\theta = \frac{1}{3}$. Assuming the string to be stretched and straight, find :
    i. the height of the kite above the ground level
    ii. The distance between the lower end of the string and the foot of the perpendicular from the kite to the ground.

24. Solve for x and y: $\frac{1}{2(2x+3y)} + \frac{12}{7(3x-2y)} = \frac{1}{2}$ ; $\frac{7}{(2x+3y)} + \frac{4}{(3x-2y)} = 2$

25. If $\cot\theta = \frac{7}{8}$, evaluate (i) $\cos^2\theta + \sin^2\theta$ (ii) $\cos^2\theta - \sin^2\theta$.

26. Solve the following equation for x: $\frac{1}{2a+b+2x} = \frac{1}{2a} + \frac{1}{b} + \frac{1}{2x}$ ; $a \neq 0, b \neq 0, x \neq 0$

27. Two places A and B are 120 km apart on a highway. A car starts from A and another from B at the same time. If the cars move in the same direction at different speeds, they meet in 6 hours. If they travel towards each other, they meet in 1 hours 12 minutes. Find the speeds of the two cars.

28. If A + B = 90°, prove that $\sqrt{\frac{\tan A\tan B+\tan A\cot B}{\sin A\sec B}-\frac{\sin^2 B}{\cos^2 A}}=\tan A$

29. The difference of mother's age and her daughter's age amount together to 21 years. Fourth part of the product of their ages is less than the mother's age by 6 years. Find how old they are now.

30. Find all the zeroes of the polynomial $2x^4 - 9x^3 + 5x^2 + 3x - 1$, if two of its zeroes are $2 + \sqrt{3}$ and $2 - \sqrt{3}$.

# Science

**Instructions:**

a) Students to do the questions in their respective CA/HA registers.

b) To submit the registers by 5th July 2017

## Section A: Biology

1. What process in plants is known as transpiration?
2. How do autotrophs obtain CO2 and N2 to make their food?
3. Which pancreatic enzyme is effective in digesting proteins?
4. After a vigorous exercise ,you may experience cramps in your leg muscles. Why does this happen?
5. Give one structural and one functional difference between artery and vein.
6. What is functional difference between four chambers of the heart?
7. How are oxygen and carbon dioxide transported in human beings?How are lungs designed to maximize the surface area for the exchange of gases?
8. Name the three kinds of cells present in blood. Write one function of each of them.
9. Explain structure and functions of unit of excretion in human beings.
10. What are the methods used by plants to get rid of excretory products?

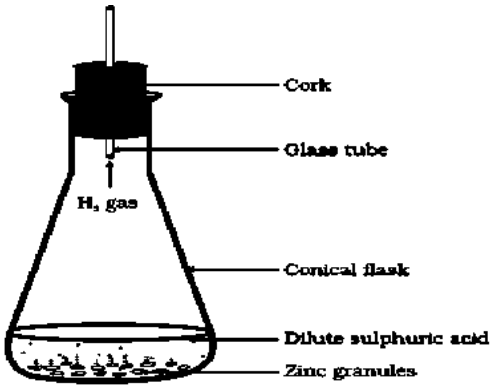
## Section B: Physics

1. Calculate the resistivity of iron if an iron wire of length 1 meter and area of cross section 1 $mm^2$ has resistance 10 ohm.
2. State Ohm's law and how it can be verified experimentally.
3. Let the resistance of an electrical component remains same while the potential difference across the ends of the component decreases to half of its former value. What change will occur with current through it?
4. A circuit having two electric bulbs of resistances 20 ohm and 30 ohm is connected in series across a battery of unknown value. If current of 2 ampere is flowing in a circuit. Find the voltage of battery.
5. In a circuit three resistances of 1ohm, 2 ohm, 3 ohm are connected in Series across a 12 volt battery. Calculate the current flowing across the circuit and voltage drop across each resistance.
6. Draw a systematic diagram of an electric circuit consisting of a battery of two cells each of 1.5 V, 5 ohm, 10 ohm, 15 ohm resistors and plug key which are connected in series.
7. What is the relation between work, charge and potential difference?
8. What is the function of cell in a circuit?

9. Find the amount of current that flows through the circuit when $10^{20}$ electrons flow in 10 seconds.
10. State the factors on which resistance of a conductor depends?

## Section C: Chemistry

1. A compound 'X' is used for drinking, has pH = 7. Its acidified solution undergoes decomposition in presence of electricity to produce gases ' Y' and 'Z' The volume of Y is double than Z. Y is highly combustible whereas Z is supporter of combustion. Identify X. Y & Z and write the chemical reactions involved.
2. An aqueous solution of metal nitrate P reacts with sodium bromide solution to form yellow not of compound O which is used in photography. O on exposure to sunlight undergoes decomposition reaction to form metal present in P along with reddish brown gas. Identify P&O. Write the chemical reaction & tvpe of chemical reaction.
3. Bhawana took a pale green substance A in a test tube, and heated it over the flame of a burner. A brown colored residue B was formed along with evolution of two gases with burning smell of Sulphur. Identify A & B. Write the chemical reaction involved.
4. A student took 2-3 g of a substance X in a glass beaker & poured water over it slowly. He observed bubbles along with hissing noise. The beaker becomes quite hot. Identify X. What type of reaction is it?
5. A reddish-brown vessel developed a green colored solid X when left open in air for a long time. When reacted with dil $H_2S0_4$. it forms a blue colored solution along with brisk effervescence due to colorless & odorless gas Z. X decomposes to form black colored oxide Y of a reddish-brown metal along with gas Z. Identify X. Y. & Z.
6. A substance X used for coating iron articles is added to a blue solution of a reddish-brown metal Y. The color of the solution gets discharged Identify X and Y & also the type of reaction.
7. A student has mixed the solutions of lead nitrate and potassium iodide.
   (i) What was the color of the precipitate formed? Can you name the compound precipitated?
   (ii) Write the balanced chemical equation for this reaction.
   (iii) What type of reaction is it?
8. Observe the following activity & answer the Questions



- Do you observe anything happening around the zinc granules?
- Is there any change in its temperature?
- Why is glass tube not dinned in dil $H_2SO_4$?
- How is $H_2$ gas collected by downward displacement or upward displacement of water?
- Is $H_2$ gas soluble or insoluble in water?
- Is $H_2$ gas heavier or lighter than air?

9. A reddish-brown metal X when heated in presence of oxygen forms a black compound Y which is basic in nature when heated with hydrogen gas gives back X. Identify X &Y. Write the chemical reaction between Y & $H_2$ Identify the substance being oxidized & reduced.
10. Define corrosion and rancidity. What are the various ways to prevent corrosion and rancidity of food?

# Sample Question Paper

| Subject : Science | Class : X | Holiday Homework | M.M.: 40 |
|---|---|---|---|

**This paper contains 2 printed pages and 19 questions.**

**General Instructions:**

a) All questions are compulsory.
b) Students to do the questions in their respective CA/HA registers.
c) To submit the registers by 5th July 2017

This paper contains 2 printed pages and 19 questions.

General Instructions: All questions are compulsory.

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## Physics

Q1. Draw a circuit diagram with a cell, an electric bulb, an ammeter and plug key. 1

Q2. On what factors does the resistance of a conductor depend? 2

Q3. Calculate the amount of charge that would flow in 3 hours through an element of an electric bulb drawing a current of 0.50 A. 2

Q4. What is ohm's law? Also Plot and describe V & I graph. 2

Q5. A copper wire has diameter 0.5mm and Resistivity of $1.6 \times 10^{-8}$ Ω-m. What be the length of this wire to make its resistance10 Ω? How much does the resistance change if diameter is doubled? 3

Q6. (a) What do you mean by electric potential? 3

(b) A wire of length L and resistance R is stretched so that its length is doubled and the area of cross-section is halved. What will be its:-

(i) Resistance (ii) Resistivity

## Chemistry

Q7. Define rancidity. 1

Q8. Why green crystals of ferrous sulphate on heating in dry test tube become colorless? 2

Q9. What does one mean by exothermic and endothermic reactions? Give examples. 2

Q10. What is redox reaction? When a magnesium ribbon burns in air with a dazzling flame and forms a white ash, is magnesium oxidised or reduced? Why? 2

Q11. (i) What is observed when a solution of potassium iodide is added to a solution of lead nitrate taken in a test tube? 3

(ii) What type of reaction is this?

(iii) Write a balanced chemical equation to represent the above reaction

Q12. Define displacement reaction. Give one example of it, how it is different from double displacement reaction? 3

**Biology**

Q13. Define peristalsis. 1

Q14. Give one point of difference between ingestion and egestion. 1

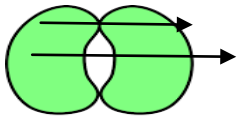
Q15. What would happen to plants, if they are not exposed to sunlight? Write down the equation for the affected process. 2

Q16. Give functions of the following enzymes: 2

(a) Salivary amylase

(b) pepsin

Q17. Observe the diagram given and label the marked parts. Also mention the functions carried out by the structure given 2



Q18. Study the diagram given below and answer the questions that follows: 3

Name and label

(a) The part which churns the food.

(b) Organ which releases trypsin

(c) Organ which releases bile salts.

Q19. With the help of a flow chart explain different types of heterotrophic nutrition. Give one example of each type. 3

# Social Science

**Geography (Disaster Management)**
**Preparedness and practical Understanding skill**
**(Compilation in a Folder)**

| | |
|---|---|
| **Month** | May |
| **Topic** | **Social Science Disaster Management (As Prescribed By CBSE)** |
| **Content Coverage** | Theme-<br><br>**PROJECT 1 :-** role of government/non govt. functionaries in your locality on their role in disaster management.<br><br>**PROJECT 2 :-** Generating awareness on disaster management.<br><br>**PROJECT 3 :-** Preparation of models of disaster resilient structures.<br><br>**PROJECT 4 :-** Pocket guide on first aid.<br><br>**PRJOECT 5 :-** institutional case study on disaster response.<br><br>**PROJECT 6 :-** Communication facilities for disaster management.<br><br>**PROJECT 7 :-** Preparation of disaster Contingency Plan .<br><br>**Students will choose one Project out of these**<br><br>**Teacher will give guidelines about each project to the students .** |
| **Nature of task** | **Individual Activity** |
| **Learning Objectives** | • To create awareness among the students about Disaster Management.<br>• To engage in activities which will help minimizing the damage caused by Disaster.<br>• To impart knowledge about Disaster Preparations, relief & recovery |
| **Task / Tools / Techniques** | Students will prepare a folder |
| **Execution of task / Procedure** | 1) The project will be made in a a4 size paper sheet neatly kept in a folder<br>2) Outer cover of the folder of the project should depict the theme of the project<br>3) Name of the student , class and section should be written on the right hand side bottom portion of the front page<br>4) Each page should be serially numbered<br>5) First page inner side should contain index along with sub topics with serial number of pages |

| | |
|---|---|
| | 6) Students should mention the acknowledgement of the teachers, parents, neighbours and any professional from whom the help is sought for the project<br><br>7) Students must mention the source of information i.e. internet, newspaper, magazine, youtube, books etc. With dates. |
| **Criteria / Rubrics for assessment** | The students will be assessed on the basis of<br><br>Content accuracy and originality –(1 Mark), Presentation and creativity-(1 Mark), Process of Project completion-Initiative, Cooperativeness, Participation and punctuality-(1 Mark), Viva or written test for content assimilation-2marks |