



**PRATAP**  
INTERNATIONAL SCHOOL  
POCKET -2, SEC- 24, ROHINI, NEW DELHI

**HOLIDAY HOMEWORK**  
**CLASS - X**  
**SESSION 2020-21**

**SUBJECT-ENGLISH**

**Q-1 Collect any five news items on the given issues. Paste them in a scrapbook and comment on any two in 120-150 words.**

- a. Environmental Issues
- b. Technological Developments
- c. Women Centric Issue

**Q-2 Spurt of violence previously unknown in Indian Schools makes it incumbent on the educationists to introduce value education effectively in schools. Write an article in 150-200 words expressing your views on the need of value education. You are Anu/Aditya.**

**Q-3 Do Revision of all the chapters completed till now.**

**SUBJECT-HINDI**

अंक - 5

1. 'मुंशी प्रेमचंद' एक सशक्त उपन्यासकार विषय पर परियोजना कार्य करे। (चित्र सहित )

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या

सूरदास जी का जीवन परिचय और उनके पदों का संग्रह कर परियोजना कार्य करे। (चित्र सहित )

नोट: पढ़ाए गए सभी पाठों का कार्य पूर्ण करें और पुनः दोहराए।

## SUBJECT-SCIENCE

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### BIOLOGY

1. Why is small intestine in herbivores longer than in carnivores?
2. Define the following : (a) Emulsification (b) Peristalsis (c) Excretion
3. State the function of following : (a) Alveoli (b) Valves (c) Blood Platelets
4. (a) Name all digestive enzymes present in our digestive system.  
(b) Explain the process of digestion of carbohydrates, fats and proteins.
5. (a) Draw a diagram depicting the Human Alimentary canal and label on it, Gall Bladder, liver and pancreas.  
(b) State the role of liver and pancreas
6. Name the organ which performs the following functions in humans:  
(a) Absorption of digested food (b) Absorption of water
7. Explain the processes of aerobic respiration in mitochondria of a cell and anaerobic respiration in yeast and muscle with the help of word equations.
8. Name any two parts of Human Heart which carry oxygenated and deoxygenated blood.
9. Mention any two structural differences between arteries and veins.
10. (a) Name the basic filtration unit present in the kidney.  
(b) Draw excretory system in human beings and label the following organs of excretory system which perform following functions :
  - (i) Form urine.
  - (ii) Is a long tube which collects urine from kidney.
  - (iii) Store urine until it passed out.

## CHEMISTRY

### Assignment On Chemical reactions and Equations

**Q1. What type of chemical reactions take place when:**

- a) Limestone is heating?**
- b) A magnesium wire is burnt in air?**
- c) Electricity is passed through water?**
- d) Ammonia and hydrogen chloride are mixed?**
- e) Silver bromide is exposed to sunlight?**

**Q2. An iron knife kept dipped in a blue copper sulphate solution turns the blue solution light green. Why?**

**Q3. A copper coin is kept in a solution of silver nitrate for some time. What will happen to the coin?**

**Q4. What happens when crystals of ferrous sulphate are heated over the flame of a burner or spirit lamp in a dry boiling tube?**

## PHYSICS

**1. DO FOLLOWING ASSIGNMENT IN YOUR PHYSICS NOTEBOOK:**

**1. Define Electric Power. Derive its expression. Write the relation between Power, Current, Potential Difference, and Resistance.**

**2. An electric bulb is connected to a 220V generator. The current is 0.5 A. What is the power of the bulb?**

**3. How much energy is dissipated in 10 minutes when a current of 4 A is flowing through a potential drop of 60 V?**

**4. Which uses more energy, a 250 W television set in 1 hour or a 1200 W toaster in 10 minutes?**

**5. An electric refrigerator rated 400 W operates 8 hours per day. What is the cost of energy to operate it for a month at Rs. 3 per kWh?**

6. An electric heater of resistance  $80\Omega$  draws  $15\text{ A}$  from the service mains for 2 hours. Calculate the rate at which heat is developed in the heater.

7. The figure below shows three cylindrical copper conductors along with their face areas and lengths.

Discuss in which geometrical shape the resistance will be highest.

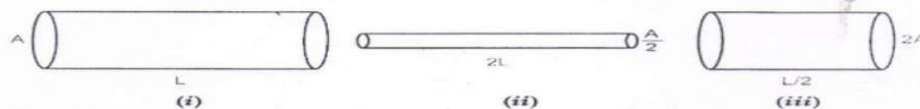
8. Two devices of rating  $44\text{ W}, 220\text{ V}$  and  $11\text{ W}, 220\text{ V}$  are connected in series. The combination is connected across a  $440\text{ V}$  mains. The fuse of which of the two devices is likely to burn when the switch is ON? Justify your answer.

9. You have two electric lamps having rating  $40\text{ W}: 220\text{ V}$  and  $60\text{ W}: 220\text{ V}$ . Which of the two has a higher resistance? Give reason for your answer. If these two lamps are connected to a source of  $220\text{ V}$ , which will glow bright.

10. Find the current drawn from the battery by the network of four resistors shown in the figure.

2. Complete your Practical file. You need to do following experiments in your file:

1. Studying the dependence of potential difference ( $V$ ) across a resistor on the current ( $I$ ) passing through it and determine its resistance. Also plotting a graph between  $V$  and  $I$ .



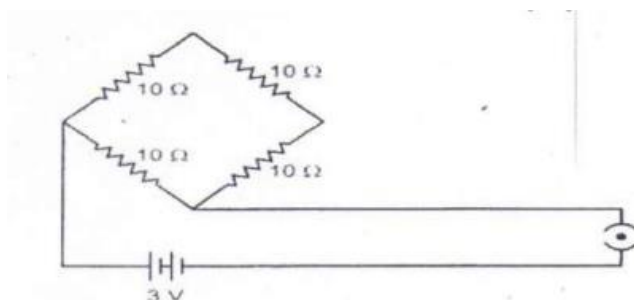
2. Determination of the equivalent resistance of two resistors when connected in series and parallel.

3. Determination of the focal length of:

- i) Concave mirror
- ii) Convex lens

by obtaining the image of a distant object.

4. Tracing the path of a ray of light passing through a rectangular glass slab for angles of incidence. Measure angle of incidence, angle of refraction, angle of emergence and interpret the



path of a ray of light passing through a rectangular glass slab for angles of incidence. Measure angle of incidence, angle of refraction, angle of emergence and interpret the

result.

5. Tracing the path of the rays of light through a glass prism.

6. the image distance for varying object distances in case of a convex lens and drawing corresponding ray diagrams to show the nature of image formed.

Use following link to complete your Practical file:

<https://www.cbsetuts.com/ncert-class-10-science-lab-manual/>

**Guidelines:**

1. This holiday homework will be checked and internal assessment will be done on the basis of same.

2. Maintain neat and clean practical file and notebook of physics.

3. No cutting and overwriting is allowed in notebook.

4. Each record of experiment will be written in the following order:

1. Aim ,2. Materials Required,3.Theory,4. Observations and Calculations,5. Conclusion/Result

**Note:** 1. Necessary circuit diagram must be part of your record.

2. Readings must be in tabular form with units written with them.

3. Each experiment record must be completed and well presented.

## MATHEMATICS

### “ASSIGNMENT QUESTIONS”

#### CHAPTER 3

1. 6 men and 10 women can finish making pots in 8 days, while the 4 men and 6 women can finish it in 12 days. Find the time taken by the one man alone from that of one woman alone to finish the work.

2. A boat covers 14 km in upstream and 20 km downstream in 7 hours. Also it covers 22 Km upstream and 34 Km downstream in 10 hours. Find the speed of the boat in still water and of that the stream.

3. Draw the graph of  $2x+y=6$  and  $2x-y+2=0$ . Shade the region bounded by these lines and x axis. Find the area of the shaded region

4. When you add two numbers and the number obtained by reversing the order of its digits is 165. If the both numbers differ by three, find the number.
5. A number say  $z$  is exactly the four times the sum of its digits and twice the product of the digits. Find the numbers.
6. Solve graphically  $4x-3y+4=0$ ,  $4x+3y-20=0$
7. There are two points on a highway  $a$ ,  $b$ . They are 70 km apart. An auto starts from  $A$  and another auto starts from  $B$  simultaneously. If they travel in the same direction, they meet in 7 hours, but if they travel towards each other they meet in 1 hour. Find how fast the two autos are.
8. A diver rowing at the rate of 5 km/h in still water takes double the time in going 40 km upstream as in going 40 km downstream. Find the speed of the stream.
9. The larger of two supplementary angles exceeds thrice the smaller by 20 degrees. Find them.
10. The sum of two children is ' $a$ '. The age of the father is twice the ' $a$ '. After twenty years, his age will be equal to the addition of the ages of his children. Find the age of father.

## CHAPTER 2

1. If one zero of the polynomial  $5z^2 + 13z - p$  is reciprocal of the other, then find  $p$ .
2. If the product of two zeroes of polynomial  $2x^3 + 3x^2 - 5x - 6$  is 3, then find its third zero.
3. Find the polynomial of least degree which should be subtracted from the polynomial  $x^4 + 2x^3 - 4x^2 + 6x - 3$  so that it is exactly divisible by  $x^2 - x + 1$ .
4. Is polynomial  $y^4 + 4y^2 + 5$  have zeroes or not?
5. Write a quadratic polynomial, sum of whose zeroes is  $2\sqrt{3}$  and product is 5.
6. Write the zeroes of the polynomial  $x^2 + 2x + 1$ .
7. If the zeroes of the polynomial  $f(x) = x^3 - 12x^2 + 39x + a$  are in AP, find the value of  $a$ .
8. A polynomial  $g(x)$  of degree zero is added to the polynomial  $2x^3 + 5x^2 - 14x + 10$  so that it becomes exactly divisible by  $2x - 3$ . Find the  $g(x)$ .
9. Find the zeroes of the quadratic polynomial  $x^2 + 5x + 6$  and verify the relationship between the zeroes and the coefficients.
10. If the zeroes of polynomial  $x^3 - ax^2 + bx - c$  are in AP then show that  $2a^3 - 9ab + 27c = 0$
11. If 1 and  $-1$  are zeroes of polynomial  $Lx^4 + Mx^3 + Nx^2 + Rx + P$ , show that  $L + N + P = M + R = 0$
12. Draw graph of the function  $f(x) = -2x^2 + 4x$ .
13. If  $x + a$  is a factor of the polynomial  $x^2 + px + q$  and  $x^2 + mx + n$  prove that  $a = \frac{n-q}{m-p}$ .

14. Find a cubic polynomial with the sum, product of its zeroes taken two at a time and product of its zeroes are  $3, \frac{-1}{2}, \frac{5}{4}$  respectively.
15. Write cubic polynomial whose zeroes are  $\frac{2+\sqrt{5}}{2}, \frac{2-\sqrt{5}}{2}, 4$ .
16.  $\alpha, \beta, \gamma$  are zeroes of cubic polynomial  $kx^3 - 5x + 9$ .  
If  $\alpha^3 + \beta^3 + \gamma^3 = 27$ , find the value of k.
17.  $\alpha, \beta, \gamma$  are zeroes of cubic polynomial  $x^3 - 12x^2 + 44x + c$ .  
If  $\alpha, \beta, \gamma$  are in AP, find the value of c.
18. Two zeroes of cubic polynomial  $ax^3 + 3x^2 - bx - 6$  are  $-1$  and  $-2$ . Find the third zero and value of a and b.
19.  $\alpha, \beta, \gamma$  are zeroes of cubic polynomial  $x^3 - 2x^2 + qx - r$ .  
If  $\alpha + \beta = 0$  then show that  $2q = r$ .
20.  $\alpha, \beta, \gamma$  are zeroes of polynomial  $x^3 + px^2 + qx + 2$  such that  $\alpha\beta + 1 = 0$ . Find the value of  $2p + q + 5$ .

#### CHAPTER 4

1. By increasing the list price of a book by Rs. 10, a person can buy 10 books less for Rs. 1200. Find the original list price of the book.
2. A passenger train takes 2 hours less for a journey of 300 km, if its speed is increased by 5 km/hr from its usual speed. Find its usual speed.
3. The numerator of a fraction is one less than its denominator. If three is added to each of the numerator and denominator, the fraction is increased by  $\frac{3}{28}$ . Find the fraction.
4. The difference of squares of two natural numbers is 45. The square of the smaller number is four times the larger number. Find the numbers.
5. Solve for x:  
$$\frac{x+1}{x-1} + \frac{x-2}{x+2} = 3; (x \neq 1, -2)$$
6. Using quadratic formula, solve the following for x:  
$$9x^2 - 3(a^2 + b^2)x + a^2b^2 = 0$$
7. The sum of the squares of two consecutive odd numbers is 394. Find the numbers.
8. Solve for x:  
$$\frac{1}{a+b+x} = \frac{1}{a} + \frac{1}{b} + \frac{1}{x}; a \neq 0, b \neq 0, x \neq 0$$
9. Find the roots of the following quadratic equation:  
$$\frac{2}{5}x^2 - x - \frac{3}{5} = 0$$
10. Find the roots of the equation:  
$$\frac{1}{2x-3} + \frac{1}{x-5} = 1; x \neq \frac{3}{2}, 5$$

## Social Science

### History:

- ~ Why Gandhi ji decided to withdraw the Non-Cooperation Movement. Why Gandhi ji decided to withdraw the Non-Cooperation Movement.
- ~ What is meant by the idea of Satyagraha?
- ~ List all the different social groups which joined the Non-Cooperation Movement of 1921. Then choose any three and write about their hopes and struggles to show why they joined the movement.
- ~ Discuss the Salt March to make clear why it was an effective symbol of resistance against colonialism.
- ~ Imagine you are a woman participating in the Civil Disobedience Movement. Explain what the experience meant to your life.

### Geography:

- ~ Explain the land use pattern in India and why has the land under forest not increased much since 1960-61?
- ~ How has technical and economic development led to more consumption of resources?
- ~ What type of soil is found in the river deltas of the eastern coast? Give three main features of this type of soil.
- ~ Name three states having black soil and the crop which is mainly grown in it.
- ~ What are the biotic and abiotic resources? Give some examples.

### Political Science:

- ~ What are the different forms of power-sharing in modern democracies? Give an example of each of these.
- ~ State one prudential reason and one moral reason for power-sharing with an example from the Indian context.
- ~ After reading this chapter, three students drew different conclusions. Which of these do you agree with and why? Give your reasons in about 50 words. Thomman – Power sharing is necessary only in societies which have religious, linguistic or ethnic divisions.



**Mathayi – Power sharing is suitable only for big countries that have regional divisions.  
Ouseph – Every society needs some form of power sharing even if it is small or does not have social divisions.**

**~ The Mayor of Merchtem, a town near Brussels in Belgium, has defended a ban on speaking French in the town’s schools. He said that the ban would help all non-Dutch speakers integrate into this Flemish town. Do you think that this measure is in keeping with the spirit of Belgium’s power-sharing arrangements? Give your reasons in about 50 words.**

**~ Read the following passage and pick out any one of the prudential reasons for power sharing offered in this. “We need to give more power to the panchayats to realise the dream of Mahatma Gandhi and the hopes of the makers of our Constitution. Panchayati Raj establishes true democracy. It restores power to the only place where power belongs in a democracy – in the hands of the people. Giving power to Panchayats is also a way to reduce corruption and increase administrative efficiency. When people participate in the planning and implementation of developmental schemes, they would naturally exercise greater control over these schemes. This would eliminate the corrupt middlemen. Thus, Panchayati Raj will strengthen the foundations of our democracy.”**

### **Economics:**

**~ Why do different people have different notions of development? Which of the following explanations are more important and why?**

**~ In Tamil Nadu, 90% of the people living in rural areas use a ration shop, whereas in West Bengal only 35% of rural people do so. Where would people be better off and why?**

**~ Explain the Human Development Report.**

**~ Why do we use averages? Are there any limitations to their use? Illustrate with your own examples related to development.**

**~ Find out the present sources of energy that are used by the people in India. What could be the other possibilities fifty years from now?**

### **Project Work**

**1. Make a project on Disaster Management.**

**2. Make project on any one of the following:**

~ Consumer Awareness

or

~ Social Issues

or

~ Sustainable Development

**General Instructions:**

| <b>S.No.</b> | <b>Aspects</b>                                    | <b>Marks</b> |
|--------------|---------------------------------------------------|--------------|
| <b>A.</b>    | <b>Content accuracy, originality and analysis</b> | <b>2</b>     |
| <b>B.</b>    | <b>Presentation and creativity</b>                | <b>2</b>     |
| <b>C.</b>    | <b>Viva Voce</b>                                  | <b>1</b>     |
|              |                                                   |              |
|              |                                                   |              |

**COMPUTER APPLICATIONS**

**BOOK NAME: CYBER BEANS**

**CHAPTER 1: INTERNET BASICS (ALL UNSOLVED EXERCISE QUESTIONS OF SECTION 3, 5 AND 6)**

**CHAPTER 2: INTERNET SERVICES (ALL UNSOLVED EXERCISE QUESTIONS OF SECTION 2, 5, 6 AND 7)**



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