

$$(e) \frac{16}{x} - 1 = \frac{15}{x+1}$$

$$2. (a) x^2 + 8x - 2 \quad (b) \frac{2}{x^2} - \frac{5}{x} + 2 = 0$$

$$(c) 4x^2 + 4bx - (a^2 - b^2) = 0 \quad (d) \sqrt{2}x^2 - 3x - 2\sqrt{2} = 0$$

3. For what values of K are the roots of the quadratic Equations

$$3x^2 + 2Kx + 27 = 0$$

(a) real and equal      (b) no real roots      (c) real

4. Find the values of p for which the quadratic Equations

$$(2p+1)x^2 - (7p+2)x + (7p-3) = 2 \text{ has equal roots. Hence, find the roots of the equations.}$$

5. If -5 is a root of the quadratic equation  $2x^2 + px - 15 = 0$  and the quadratic equation  $p(x^2 + x) + k = 0$  has equal roots, find the value of K.

6. A two-digit number is such that the product of its digits is 14. If 45 is added to the number, the digits interchange their places. Find the number.

7. The sum of the ages of a boy and his brother is 25 years, and the product of their ages in years is 126. Find their ages.

8. A truck covers a distances of 150 km at a certain average speed and then covers another 200 km at an average speed which is 20 km per hour more than the first speed. IF the truck covers the total distance in 5 hours, find the first speed of the truck.

9. The distance between Mumbai and Pune is 192 km. Travelling by the Deccan Queen, it takes 48 minutes less than another train. Calculate the speed of the Deccan Queen if the speeds of the two hours trains differ by 20 km/hr.

10. Two water taps together can fill a tank in 6 hours. The tap of larger diameter takes 9 hours less than the smaller one to fill the tank separately. Find the time in which each tap can separately fill the tank.

- ACTIVITY:-
- To find whether the given system of equations are consistent or inconsistent
  - To verify Basic Proportionally theorem by paper cutting and pasting method.



# SEEDLING PUBLIC SCHOOL

Holidays ! Holidays ! on the way, enjoy and be gay.

This should be the way to learn and play !

HOLIDAY FUN -2019-20

Class - X



## Instructions :

- Use loose sheets and make a file.
- Work should be neat and appealing.
- Grades will be given for Holiday Fun as per CBSE norms**

## All Questions to be done in English Language Notebook

I 1. Write a short story in 200-250 word with the help of the cues given below. Give a suitable title to the story.

I sat frozen as if made of stone ..... I did not move a muscle .... I did not blink and stared unseeingly when I saw.

OR

Honesty is the best policy - its merit was realized by Rahul / Riya when.....

- Write an article in 100-120 words on 'Importance of Festivals in our social life'. You are Anuja/Anupam.
- You are Yogita / Yogesh, the Head Librarian of Shining stars Public School. Delhi. Write a letter to Janta Book Depot, Delhi placing bulk order for books needed for the school library. You can invent your own details.
- Make a collage on 'glimpses of India' (Historical Monuments, Tourist Places) Refer to Chapter - 7 First Flight.
- Write a debate for or a against the motion.  
This house believes that 'Intelligence is defined by the results of an exam'.

- II
- 1- vki ifrfnu l ekpkj&i=] Vh-oh bR; kfn ij <jkafokki u n\$krsl qursg& viuh i l mhrnk fdlgha i kp oLr/q/ka ij foKki u cukb, A
  - 2- dN , d segku 0; fDrRo gq g\$ftudh tleHkie Hkkjr gSijUrqdeHkie dkbZvU; n\$ k jgk g\$ , d sfdl h , d 0; fDr fo'k\$sk dsfo"K; ea tkudkj h , d= dj , d ikdY; r\$ kj dj
  - 3- fo | ky; if=dk grqLojfp r dgkuh] dforK] l lej .k] ; k=koRrKUr] y\$[k vkfn fdl h , d ij fyf[k, A

4- fn, x, okn&fookn fo"n; ij i {k&foi {k ea vi usfopkj fyf[k, A  
 'n'sk dh I hek ij yMusokyk gh I Ppk n'skKDr\*

**OR**

\* rcrivez et preparez la recette (indian or French) en Francais

\* Preparez la dictionnaire de poche

III.1. Solve each of the following systems of equations graphically:

$$(a) \begin{cases} 3x + y + 1 = 0 \\ 2x - 3y + 8 = 0 \end{cases} \quad (b) \begin{cases} 2x + 3y = 2 \\ x - 2y = 8 \end{cases}$$

2. Solve for  $x$  and  $y$ .

$$(a) \begin{cases} x - y = 3 \\ \frac{x}{3} + \frac{y}{2} = 6 \end{cases} \quad (b) \begin{cases} 2x - \frac{3y}{4} = 3 \\ 5x = 2y + 7 \end{cases}$$

$$(c) \begin{cases} 7(y + 3) - 2(x + 2) = 14 \\ 4(y - 2) + 3(x - 3) = 2 \end{cases}$$

$$(d) \frac{x + y - 8}{2} = \frac{x + 2y - 14}{3} = \frac{3x + y - 12}{11}$$

$$(e) \begin{cases} \frac{5}{x} - \frac{3}{y} = 1 \\ \frac{3}{2x} + \frac{2}{3y} = 5 \end{cases} \quad (f) \begin{cases} 4x + 6y = 3xy \\ 8x + 9y = 5xy \end{cases}$$

$$(g) \begin{cases} \frac{3}{x+y} + \frac{2}{x-y} = 2 \\ \frac{9}{x+y} - \frac{4}{x-y} = 1 \end{cases}$$

$$(h) \begin{cases} \frac{1}{2(x+2y)} + \frac{5}{3(3x-2y)} = \frac{-3}{2} \\ \frac{5}{4(x+2y)} - \frac{3}{5(3x-2y)} = \frac{61}{60} \end{cases}$$

$$(i) \begin{cases} \frac{bx}{a} - \frac{ay}{b} + a + b = 0 \\ bx - ay + 2ab = 0 \end{cases}$$

$$(j) \begin{cases} \frac{bx}{a} + \frac{ay}{b} - a^2 + b^2 \\ x + y = 2ab \end{cases}$$

$$(k) \begin{cases} \frac{ax}{b} - \frac{by}{a} = a + b \\ ax - by = 2ab \end{cases}$$

$$2ax + 3by = a + 2b$$

$$(l) 3ax + 2by = 2a + b$$

3. For what value of  $K$  does the system of equation has a unique solutions.

$$\begin{cases} 2x + 3y = 15 \\ kx - 6y - 8 = 0 \end{cases}$$

4. For what value of  $K$  does the following system of equations has an infinite number of solutions.

$$\begin{cases} (K-1)x - y = 5 \\ (K+1)x + (1-k)y = (3K+1) \end{cases}$$

5. For what value of  $K$  does the following system of equations has no solutions:

$$\begin{cases} Kx + 3y = K - 3 \\ 12x + Ky = K \end{cases}$$

6. A railway half ticket costs half the full fare and the reservation charge is the same on half ticket as on half ticket as on full ticket. One reserved first class ticket from Mumbai to Delhi costs Rs. 4150/- while one full and one half reserved first class ticket costs Rs. 6255. What is the basic first class full fare and What is the reservation charge?

7. On selling a tea set at 5% loss and a lemon set at 15% gain, a crockery seller gains Rs. 7/-. If he sells the tea set at 5% gain and the lemon set at 10% gain, he gains Rs. 13/-. Find the actual price of each of the tea set and the lemon set.

8. A chemist has one solution containing 50% acid and a second on containing 25% acid. How much of each should be used to make 10 Litres of a 40% acid solution?

9. A jeweller has bars of 18 - carat gold and 12 - carat gold. How much of each must be melted to gether to obtain a bar of 16 carat gold, weighing 120g?

10. A boat goes 12 km upstream and 40 km downstream in 8 hours. It can go 16 km upstream and 32 km downstream in the same time. Find the speed of the boat in still water and the speed of the stream.

1. Solve each of the following quadratic equations:

$$(a) 4 - 11x = 32x^2 \quad (b) \sqrt{2}x^2 + 7x + 5\sqrt{2} = 0$$

$$(c) 2x^2 + ax - a^2 = 0 \quad (d) x^2 - (2b-1)x + (b^2 - b - 20) = 0$$

- III. Project report should be hand written only.
- IV. Students can use Primary sources like newspaper cuttings photographs, written speeches.
- VIII. Create a table in MS Access 2010 database Do the following tasks:
- (a) The table should have the fields, Employee Code (primary key), Employee Name, Branch, Basic, HR and DA.
- (b) Add another field to the designview that is 'Total Salary' which is Basic + HR + DA.
- (c) Populate the table with the following data:

| Empoloyee Code | Empoloyee Name | Branch    | Basic  | HR   | DA   |
|----------------|----------------|-----------|--------|------|------|
| 121            | Yash           | Delhi     | 151000 | 2500 | 2500 |
| 135            | Himesh         | Pune      | 150000 | 1500 | 2700 |
| 142            | Lokesh         | Delhi     | 120000 | 1950 | 1200 |
| 186            | Rahul          | Mumbai    | 172000 | 2000 | 2140 |
| 166            | Nitin          | Bangalore | 95000  | 1100 | 1130 |

- (d) Create a report on the basis of the preceding data.
- (e) Save the table with the name 'Employee\_Record'.
- (f) Create a query to display 'Employee Name' whose "Basic' is greater than 1,00,000. Using Query Design.
- (g) Create a form use 'Form design' and add two new records to the table.
- (h) Write the steps to create all the above database objects in file.

**:: END ::**

- IV. (i) Make a working model on the following according to the roll No.
- Practical Application on harnessing wind energy. (1-8)
  - Practical Application on harnessing solar energy. (9 - 16)
  - An arrangement to demonstrate Faraday's Law. (17 - 24)
  - An a.c. generator (25 - 31)
  - An arrangement comparing intensity of electric bulbs connected in series and parallel to each other. (33 - 44)

You are required to submit a report on the same throwing light on the principle and working of the model.

(ii) Record the following practicals in your lab manual as per the instructions given in the class. (All Students)

- To verify the Ohm's Law.
- To determine the equivalent resistance of two resistors connected in
  - (a) series
  - (b) parallel

**V. Do the given questions on loose sheets:**

1. On Heating blue coloured powder of copper (II) nitrate in boiling tube. Black copper oxide, oxygen and a brown gas X is formed.

- (a) Identify the type of reaction and the gas X.
- (b) Write balanced chemical equation of the reaction.
- (c) Write the pH range of aqueous solution of the gas X.

2. Name the type of reaction in the following

- (a)  $N_2 + 3H_2 \rightarrow 2NH_3$
- (b)  $CuO_2 + H_2 \rightarrow Cu + H_2O$
- (c)  $Pb(NO_3)_2 + 2KI \rightarrow PbI_2 + 2KNO_3$
- (d)  $CuSO_4 + Zn \rightarrow ZnSO_4 + Cu$
- (e)  $CH_4 + O_2 \rightarrow CO_2 + 2H_2O$
- (f)  $2AgCl \rightarrow 2Ag + Cl_2$

3. What is a redox reaction. Identify the substance oxidized and substance reduced in the following:

- (a)  $2PbO + C \rightarrow 2Pb + CO_2$
- (b)  $MnO_2 + 4HCl \rightarrow MnCl_2 + 2H_2O + Cl_2$

1. (a) While diluting an acid, why is it recommended that the acid should be

added to water and not water to acid?

(b) Dry HCL gas does not change the colour of dry litmus paper. Why?

2. How is NaOH manufactured in industries Name the process. In this process gas X is formed as a biproduct. This gas reacts with lime water to give a compound Y, which is used as a bleaching agent in the chemical Industries. Identify X and Y and write the chemical Industries. Identify X and Y and write the chemical equation of the reaction.
  3. What do you observe when you drop a few dorps of acetic acid to a test tube containing
    - (a) phenopthelein
    - (b) Distilled water
    - (c) Universal indicator
    - (d) Sodium hydrogen carbonate powder
  4. (a) A milkman adds very small amount of baking soda to fresh milk. Why does this milk take a longer time to set as curd.  
 (b) Name the product formed when  $\text{NaHCO}_3$  is heated. Write the chemical reaction involved.
  5. A white powder A is a mild corrosive base and is used in the preparation of cakes. When the powder is heated, it gives another product B. The powder B is recrystallised to get a substance C which has cleaning properties. Identify A, B and C and also write balanced chemical equations for the same.
  6. Kanchan was playing in the garden, she was stung by a wasp. Her mother applied toothpaste on the affected area and took her to the doctor.
    - (i) What does the wasp sting contain?
    - (ii) Give reason for applying toothpaste to the affected area.
1. Give reasons:-
    - (a) Platinum, gold and silver are used in making jewellery.
    - (b) Metal like sodium and potassium are stored under oil.
  2. Silver articles become black when kept in open for sometime, whereas copper vessels lose their shiny brown surfaces and gain a green coat when kept in open. Name the substances present in air with which these metals react and write the name of the product formed.

3. What are amphoteric oxides? Give an example. Write balanced chemical equation to justify your answer.
  4. (a) Why are metals not found in free state generally.  
 (b) If a strip of Aluminium with a scratched clean surface is dipped into an aqueous solution of  $\text{CuSO}_4$ , for little time, the surface of the strip become brownish what is the reason for this? Write balance chemical equations for the reaction.
  5. Show the formation of  $\text{MgCl}_2$  from its elements?
  6. In the electrolytic refining of Metal M what will you take as cathode, Anode and electrolyte.
- VI. 1. Make a power point presentation on the conservation of one of the following natural resources roll no. wise.
- Forests (1 to 10)
  - Fossil fuels (11 to 20)
  - Wild Life (21 to 30)
  - Potable water (31 onwards)
2. Practice all diagrams of Chapter 6 atleast three times in a drawing copy making sure that they are labelled correctly.
- VII Children will prepare any one project on the following topics.
- |                             |                   |
|-----------------------------|-------------------|
| (a) Consumer Awareness      | (b) Social Issues |
| (c) Sustainable Development |                   |
- Instructions :
- II. (a) A project will be prepared which contain 25 pages
  - (b) Information may be collected through internet.
  - (c) The marks will be allocated under the following headings
 

|                           |                 |                |
|---------------------------|-----------------|----------------|
| (i) Content               | (ii) Originally | (iii) Analysis |
| (iv) Overall Presentation | (v) Creativity  |                |