



ARMY PUBLIC SCHOOL BIRPUR, DEHRADUN
SUMMER HOLIDAY HOMEWORK
SESSION 2023-24
CLASS-10

HINDI

1. भारत की आजादी के 75 वर्ष पूर्ण हो गए हैं। इस यात्रा के दौरान हमने विभिन्न क्षेत्रों अनेक परिवर्तन महसूस किए जिनमें कुछ परिवर्तनों का सकारात्मक प्रभाव दिखाई देता है और कुछ ऐसे परिवर्तन भी हुए जो हम नहीं चाहते थे। बदलाव के दोनों पक्षों को अभिव्यक्त करते हुए एक पोस्टर या कविता बनाएं।

विषय - कहां थे और कहां आ गए?

या

भारत की बदलती तस्वीर

नोट - चार्ट पेपर का आधा भाग या A4 पृष्ठ(sheet) में ही बनाएं।

2. ' हरिहर काका ' कहानी के पात्रों के साथ एक नए कथानक या कहानी का निर्माण करें।(A4 पृष्ठ का प्रयोग करें)

SOCIAL SCIENCE

1. Project file on the topic Consumer Rights.
2. Collage making, pairing Uttarakhand and Puducherry

MATHS

GENERAL INSTRUCTIONS:

- (i) Do the self Assessment in a thin notebook.
- (ii) Do the activities in a practical file. (One page blank)
- (iii) The model has to be prepared by all the students compulsorily.

TIME OF SELF ASSESSMENT CH 1- REAL NUMBERS

Q1. The LCM of two numbers is 14 times their HCF. The sum of LCM and HCF is 600. If one number is 280, then find the other number.

Q2. Prove that $11 + 2\sqrt{5}$ is irrational, given $\sqrt{5}$ is irrational.

Q3. Without actually performing the long division, state whether the following rational numbers will have a terminating decimal expansion or a non-terminating repeating decimal expansion:

(i) $13/3125$ (ii) $17/8$ (iii) $64/455$ (iv) $15/1600$

Q4. Find two irrational numbers lying between $\sqrt{2}$ and $\sqrt{3}$.

Q5. Mention whether the following numbers are rational or irrational:

- (i) $(\sqrt{2} + 2)$
- (ii) $(2 - \sqrt{2}) \cdot (2 + \sqrt{2})$
- (iii) $(\sqrt{2} + \sqrt{3})^2$
- (iv) $3\sqrt{2}$

Q6. Given that $\sqrt{2}$ is irrational, prove that $(5 + 3\sqrt{2})$ is an irrational number.

CASE STUDY 1.

To enhance the reading skills of grade X students, the school nominates you and two of your friends to set up a class library. There are two sections- section A and section B of grade X.

There are 32 students in section A and 36 students in section B?

1. What is the minimum number of books you will acquire for the class library, so that they can be distributed equally among students of Section A or Section B?

2. If the product of two positive integers is equal to the product of their HCF and LCM is true then, What is the HCF (32, 36) ?

CH 2- POLYNOMIALS

Q1. Compute the zeroes of the polynomial $4x^2 - 4x - 8$. Also, establish a relationship between the zeroes and coefficients.

Q2. Find the zeroes of the $x^2 - 8x + 15$ and verify the coefficients and zeroes.

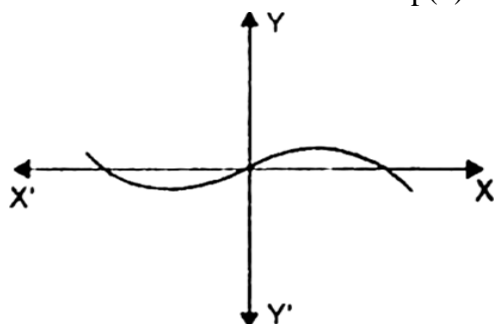
Q3. Find the value of “p” from the polynomial $x^2 + 3x + p$, if one of the zeroes of the polynomial is 2.

CASE STUDY 2:

Basketball and soccer are played with a spherical ball. Even though an athlete dribbles the ball in both sports, a basketball player uses his hands and a soccer player uses his feet. Usually, soccer is played outdoors on a large field and basketball is played indoor on a court made out of wood. The projectile (path traced) of soccer ball and basketball are in the form of parabola representing quadratic polynomial.



- 1 What is the shape of the path traced shown in the picture?
- 2 Find the number of zeroes of $p(x)$ in the graph given below:



LOGICAL REASONING QUESTIONS

1. In a row of trees, a tree is 7th from left end and 14th from right end. How many trees are there in the row ?

LEARNING BY DOING!!!

1. Prepare a working model on any topic related to your syllabus. The best models will be kept in Maths Lab.
2. Activity – (To be done in practical file -interleaf ones):
Check the consistency of any two pair of linear equations graphically. Give your introspection relating all concepts of CH-3

I.T HOLIDAY HOMEWORK

Do the following questions in a Practical File. Write the steps on the right-side page and paste the coloured printout of the output on the left page. Use *OpenOffice Writer*.

Task 1: Type a paragraph with at least 100 words and create the given styles as instructed below:

1. Heading: Font name: Times New Roman, Size: 24, Colour: Red. Give the style name: **My_Heading** (Use create style from selection command to create style)
2. Paragraph: Apply the style *Text Body* for the paragraph.
3. Quote: Font Name: Broadway, Size: 16, Colour: Blue, Alignment: Center. Give the style name: My_Quote

Task 2: Create a new document in OO Writer and type a paragraph. Insert a picture of your choice. Adjust the picture to top left of the paragraph.

Task 3: Create a certificate for “Student of the Year” and save it as a template.

Task 4: Prepare a document with different headings and apply the table of content to it.

Task 5: Write a letter to invite your parents and other guests to attend the Annual Day function of your school and merge them. Create a data source with at least 5 addresses.

ARTIFICIAL INTELLIGENCE

PROJECT:

TOPIC-Real Time Translators

Create a project on Latest Real Time Translators that are in used now a days. (Any 10)

Instructions-Project should be of 4-5 A4 pages. It should consist all relevant information along with the important pictures. Mention School Name, Your Name, Class and Topic on first page of your project and submitted in Stick file.

Write the following Python Programs:

Instructions-Write all the given python programs in AI Practical File. Program output to be written with Pencil only. Practical file should be completely covered and presentable.

1. Write a Program to input four numbers and find their sum and product.
2. Write a Program to calculate S.I. by inputting the value of Principal Amount, rate from the user and time period of 3 years.
3. Write a Program to accept Marks in 5 Subjects and their average marks also.
4. Write a Program to find the perimeter of Triangle.
5. Write a Program to Input a number and print its Square &Cube.
6. Write a Program to Input the age of a person and check whether a person is eligible to caste the vote or not.
7. Write a Program to Input a number and check whether a number is palindrome or not.
8. Write a Program to Input a number and check whether the followings are Leap yeas or not.
(YEARS- 2020, 2021, 2033, 2037, 2041)
9. Write a Program to accept the side of a sequece and print its area.
10. Riya has written down the following codes of Python. Now she wants to know the output of the given code. Answer to her query.
a = float (input (“Enter an integer”))
b = float (input (“Enter another integer”))
if a !=0:
c= b/a
print(“Quotient on division :”, C

SCIENCE

Do Art Integrated Project in a stick file on A4 sheets.

1. Read the chapter “Management of natural Resources” and make an ART INTEGRATE PROJECT. As per CBSE the integration of your state UTTARAKHAND will be done with UT PUDUCHERRY. The project should contain following points:

a) Geography, pollution level in water bodies (Ganga and sea) and management of these water bodies, Water bodies as lifeline, Role in ecology, energy

b) Flora and fauna c) tourism of the two states

Note: include maps, statistics, pictures, graphs etc

2. Complete the following practical: (in practical file)

a) Performing and observing the following reactions and classifying them into: Combination reaction, Decomposition reaction, Displacement reaction or Double displacement reaction

(i) Action of water on quicklime

(ii) Action of heat on ferrous sulphate crystals

(iii) Iron nails kept in copper sulphate solution

(iv) Reaction between sodium sulphate and barium chloride solutions

b) Preparing a temporary mount of a leaf peel to show stomata.

c) Experimentally show that carbon dioxide is given out during respiration.

3. Make 10 mcq question (apart from textbook questions) from each chapter that are taught in class.

4. Answer the following questions: (In separate note book)

Chapter 1: Chemical Reaction and Equation

Q1) What is observed when aqueous solutions of potassium iodide and lead nitrate are mixed together? Name the type of reaction and write the chemical equation for the reaction that occurs.

Q2) When copper powder is heated in a watch glass, a black substance is formed.

a) Why is this black substance is formed? Name it.

b) How can this black substance be reversed to its original form?

Q3) a) What are redox reaction? Justify with the help of five different chemical reaction.

b) Identify (i) reducing and oxidizing agent (ii) substance that is oxidized and reduced, in the chemical reaction that you have given.

Q4) A red-brown metal X forms a salt XSO_4 . When hydrogen sulphide gas is passed through an aqueous solution of XSO_4 , then a black precipitate of XS is formed along with sulphuric acid solution.

(a) What could the salt XSO_4 , be?

(b) What is the colour of salt XSO_4 ?

(c) Name the black precipitate XS.

(d) By using the formula of the salt obtained in (a) above, write an equation of the reaction which takes place when hydrogen sulphide gas is passed through its aqueous solution.

Q5) A metal salt MX when exposed to light splits up to form metal M and a gas X_2 . Metal M is used in making ornaments whereas gas X_2 is used in making bleaching powder. The salt MX is itself used in black and white photography.

(a) What do you think metal M is?

- (b) What could be gas X₂?
- (c) Name the metal salt MX.
- (d) Name any two salt solutions which on mixing together can produce a precipitate of salt MX.
- (e) What type of chemical reaction takes place when salt MX is exposed to light? Write the equation of the reaction.
- Q6) Write down the balanced chemical equations for the following reactions and identify the type of reaction in each case.
- (a) Nitrogen gas is treated with hydrogen gas to form ammonia gas.
- (b) Lead nitrate is heated strongly to form lead monoxide, nitrogen dioxide and oxygen.
- (c) A copper wire is dipped in silver nitrate solution and a shining deposit of silver is produced.

Chapter: Life process

Q1) What will happen if:

- (a) Xylem tissue in a plant is removed?
- (b) We are injured and start bleeding?

Q2) i) What is the first step in the breakdown of glucose during aerobic and anaerobic respiration? Where does it take place?

(ii) With help of equation write how the glucose is broken down during aerobic and anaerobic respiration.

(iii) ATP is called the energy currency of the cell. Why?

(iv) What is meant by "residual volume of air" in a breathing cycle?

Q3) Write in sequence the steps for experimental verification of the fact that "sunlight is essential for photosynthesis".

Q4) Explain with the help of neat and well labelled diagrams the different steps involved in nutrition in Amoeba.

Q5) What are all the glands present in human alimentary canal? Name component that are secretion by these glands and their function?

Q6) a) "Blood circulation in fishes is different from the blood circulation in human beings". Justify the statement.

(b) Describe "blood circulation" in human beings

(c) Why is there a difference in the rate of breathing between aquatic organisms and terrestrial organisms? Explain

(d) Describe the structure and function of nephron with the help of diagram.

Chapter: Our Environment

Q1) What is meant by trophic level?

(b) On an average, what percentage of energy is transferred to the second trophic level from the first trophic level? Which categories of consumers do the organisms of the second trophic level belong to ?

(c) In the following food chain, 100 J of energy is available to the snake. How much energy was available to the producers?

Plants → grasshopper → frog → snake

Q2) Explain how some harmful chemicals enter our bodies through the food chain. Why is the concentration of these harmful chemicals found to be maximum in human beings?

Q3) Define food chain and food web with the help of a diagram.

Q4)What is ozone layer? What is its role in our environment? How it is formed? What are the reasons for its depletion and how we can protect it?

Q5)What are the harmful effects of using plastic bags in our environment? How can we minimize it.

Q6)What is meant by bio-magnification?

ENGLISH

1. Read and write about ; one Indian and one British writer or poet , their life history, notable works and achievements and also mention the reason of choosing them.

2. Write a Speech on the topic “ Strategies/Plans you are going to adopt to get remarkable grades in Class 10” in about 100-150 words.

3. Write about any ten Poetic devices(figure of Speech) with examples which you have already read in the poems of your syllabus.

4. Write a letter to the editor of a national daily, expressing your opinion and views on the increased human dependence on technology. Right from a small child to an adult, or even an old man, everyone wants gadgets only-cell phone, I-pod, laptop, etc. This also has a negative effect on social relationships. Using your own ideas write a letter in 100-120 words. You are Sameer/ Sameera of 10-C Bharat Colony, New Delhi.

5. Go through all the chapters and topics that have been discussed so far in the classes.

NOTE- All written work must be done in a A4 size paper and attached in a folder after mentioning name,class, section, roll number, session and school name.