HOLIDAYS HOMEWORK

CLASS X

ARMY PUBLIC SCHOOL

MEERUT CANTT(2024-25)

English Holidays Assignment for class X

1. Download Reading App from playstore, register your self and read at least one book of your choice and write its Book Review.

2. Make a collage on different Natural and Man-made causes of agricultural loss and write a short paragraph describing your views on repercussion of development on environment.

3.Read the newspaper everyday. Write three news headlines and news in your own words per week.

4.Recapitulate all work done in English so far and prepare for Unit Test One.

ग्रीष्मावकाश गृहकार्य 2024-25

विषय–हिंदी

कक्षा–10

1. पत्र–लेखन– अपनी पसंदीदा पुस्तक का चयन करें और उसके बारे में एक विस्तृत समीक्षा लिखें। लिखे गए लेख को छपवाने का निवेदन करते हुए समाचार पत्र के संपादक को पत्र लिखिए।

2. भारत के नक्शे में अंडमान निकोबार द्वीप समूह की पहचान कर बताएँ कि दिसम्बर 2004 में आए सुनामी का इस द्वीप समूह पर क्या प्रभाव पड़ा।सुनामी के बाद पड़े प्रभावों को कम करने के लिए क्या उपाय किए जा सकते है, प्रकाश डालिए।

3. कला प्रोजेक्ट तैयार करें – विश्व की 10 ऐतिहासिक घटनाओं के प्रसिद्ध छायाचित्रों (फोटोग्राफ) का संग्रह कीजिये और सम्बंधित घटनाओं का संक्षिप्त विवरण दीजिए.

4. परियोजना कार्य

उत्तर प्रदेश, अरुणाचल प्रदेश, और मेघालय की विविधता को प्रस्तुत करने वाले एक पर्व का वर्णन करे , इस पर्व में राज्यों की सांस्कृतिक गाथाओं/ लोक नृत्य/ संगीत/ वाणिज्यिक उत्पादों का परिचय मिलता हो ,ताकि इस पर्व के माध्यम से इन राज्यों की सांस्कृतिक विशेषताओं को

समझकर मेलजोल व एकता का अनुभव किया जा सके ।

उम्मीद है ये विचार आपको पसंद आएंगे और आपकी छुट्टियों को रोमांचित और रचनात्मक बनाएंगे!

SUMMER HOLIDAY
HOMEWORK
MATHEMATICS
CLASS X (2024-25)

REAL NUMBERS

- **Solve the following Assignment Questions.**

1. If the HCF of 65 and 117 is expressible in the form 65m -117, then the value of m is
   (a) 4 (b) 2 (c) 1 (d) 3
2. For some integer q, every odd integer is of the form
   (a) q (b) q+1 (c) 2q (d) 2q + 1
3. The product of a non-zero rational and an irrational number is
   (a) always irrational (b) always rational
   (c) rational or irrational (d) one
4. On a morning walk, three persons step off together and their steps measure 40 cm, 42 cm and 45 cm, respectively. What is the minimum distance each should walk, so that each can cover the same distance in complete steps?
5. **Prove that 3 + 2√5 is irrational.**
6. Find HCF and LCM of 404 and 96 and verify that HCF × LCM = Product of the two given numbers.
7. Given that √2 is irrational, prove that (5 + 3√2) is an irrational number.
8. Write the smallest number which is divisible by both 360 and 657.
9. **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**
10. **Prove that: LCM (9 & 12) × HCF (9 & 12) = Product of 9 and 12**
11. **8 and 9 are two co-prime numbers. Using these numbers verify, LCM of Co-prime Numbers = Product of the Numbers.**
12. **Find the HCF of 12/25, 9/10, 18/35, 21/40.**

POLYNOMIALS

1. For what value of k, (–4) is a zero of the polynomial $x^2 – x – (2k + 2)$?
2. For what value of p, (–4) is a zero of the polynomial $x^2 – 2x – (7p + 3)$?
3. If 1 is a zero of the polynomial $p(x) = ax^2 – 3(a – 1) x – 1$, then find the value of a.
4. If (x + a) is a factor of $2x^2 + 2ax + 5x + 10$ find a.
5. Write the zeroes of the polynomial $x^2 + 2x + 1$.
6. Write the zeroes of the polynomial $x^2 – x – 6$.
7. Write a quadratic polynomial, the sum and product of whose zeroes are 3 and –2 respectively.
8. Find a quadratic polynomial whose zeroes are –4 and 3 and verify the relationship between the zeroes and the coefficients.
9. Find the zeroes of the quadratic polynomial $6x^2 – 3 – 7x$ and verify the relationship between the zeroes and the coefficient of the polynomial.
10. Find the zeroes of the quadratic polynomial $5x^2 – 4 – 8x$ and verify the relationship between the zeroes and the coefficient of the polynomial.

CHAPTER- PAIR OF LINEAR EQUATIONS IN TWO VARIABLES

1. For what values of a and b does the following pair of equations have an infinite number of solutions. $2x+3y=7$, $a(x+y) - b(x-y) = 3a+b-2$

2. For what value of k will the following equations have infinitely many solutions? $2x-3y=7$, $(k+1)x + (1-2k)y=5k-4$

3. The sum of denominator and numerator of a fraction is 3 less than twice the denominator. If each of the numerator and denominator is denominator is decreased by 1, the fraction becomes 1/2. Find the fraction.

4. The sum of the digits of a two-digit number is 12. The number obtained by interchanging the two digits exceeds the given number by 18. Find the number.

5. The sum of the numerator and denominator of a fraction is 12. If 1 is added to both numerator and denominator the fraction becomes 15. Find the fraction.

6. 4 men and 6 boys can finish a piece of work in 5 days while 3 men and 4 boys can finish it in 7 days. Find the time taken by 1 man alone or than by 1 boy alone.

7. A man travels 600km apart by train and partly by car. It takes 8 hours and 40 minutes if he travels 320 km by train and rest by car. It would take 30 minutes more if he travels 200 km by train and the rest by the car. Find the speed of the train and by car separately.

8. Solve the equations graphically. $2x+y=2$, $2y-x=4$. Also find the area of a triangle formed by the two lines and the line $y=0$.

9. For what value of k will pair of equations have no solution?
$3x+y =1$, $(2k -1)x + (k-1)y = 2k+1$

10. Solve the following pair of equations graphically. $x+3y=6$, $2x-3y=12$. Also find the area of the triangle formed by the lines representing the given equations with y-axis.

Quadratic Equations

1. If the equation $kx^2 – 2kx + 6 =0$ has equal roots, then find the value of k.
2. Find the roots of the following Q.E.:
   (i) $15x^2 – 10\sqrt{6}x + 20 = 0$ (ii) $x^2/3 – 11x + 1 = 0$ (iii) $3x^2 – 2\sqrt{6}x + 2 = 0$.
3. For what value of k the roots of the Q.E. $kx^2 + 4x + 1 = 0$ are real and equal?
4. Solve the following equation for x:
   (i) $1/(a + b + x) = 1/a +1/b + 1/x$ (ii) $2x^2/5 – x – 3/5 = 0$ (iii) $(x + 1)/(x-1) + (x -2)/(x + 2) = 3$
5. Solve using quadratic formula:
   (i) $9x^2 – 6ax + (a^2 –b^2)= 0$. (ii) $4x^2 -2(a^2 +b^2)x + a^2b^2 = 0$ (iii) $p^2x^2 +(p^2 – q^2)x –q^2 = 0$.
6. One fourth of a herd of camels was seen in forest. Twice of square root of the herd had gone to mountains and remaining 15 camels were seen on the bank of a river . Find the total number of camels.

7. The sum of the squares of two consecutive natural numbers is 421. Find the numbers.
8. Find two consecutive odd positive integers, sum of whose squares is 290.
9. A 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 the usual speed of the train.
10. A shopkeeper buys a number of books for Rs. 80. If he had bought 4 more books for the same amount, each would have cost him Re. 1 less. How many books did he buy?
11. A takes 6 days less than the time taken by B to finish a piece of work. If both A and B together can finish it in 4 days, find the time taken by B to finish the work.
12. In a flight of 600 km, an aircraft was slowed down due to bad weather. Its average speed for the trip was reduced by 200 km/hr and the time of flight increased by 30 minutes. Find the original duration of flight.
13. If I had walked 1 km/hr faster, I would have taken 10 minutes less to walk a distance of 2 kms. Find the rate of my walking.
14. The difference of two numbers is 5 and the difference of their reciprocals is 1/10 . Find the numbers.

Project (any one)

1. Career Opportunities

Description: After doing this project, students will be knowing a number of fields after completing

their tenth class.

For your reference, collect information from /about

a. Seniors, teachers, educationists, newspapers, internet, etc. about streams, i.e., Non-medical or Medical or Arts or Commerce, etc.

b. Various schools.

c. Reference books and study materials for your selected streams.

d. Dates of months of filling application forms for entrance examinations.

e. Steps of preparation for various entrance exams.

f. Job opportunities.

2. π(Pie)

Description : After doing this project , students will be able to learn about π(Pie) .

For your reference-

a. Collect information from books, Internet, etc. about different works done by mathematicians about π(Pie) in different intervals of time.

b. Write its approximate value up to hundred decimal places.

c. Relation of π with circle

3. uses and applications of Trigonometry in various fields.

NOTE: Project work done by you will be evaluated on the following parameters-

1. Identification and statement of the project

2. Design of the project

3. Procedure/processes adopted
4. Write-up of the project

5. Interpersonal of result

SCIENCE SUMMER HOLIDAY HOME-WORK
SESSION 2024-25
CLASS X
SUBJECT -BIOLOGY

Based on CBSE Art integrated activities

Our Environment

The theme of Earth Day 2024 is 'Planet vs plastic'

Topic 1- Research project

Microplastics are plastic pieces that measure less than five millimeters across. Some microplastics have formed by breaking away from larger plastics that have fragmented over time

Learning objectives: Students will be able to

1.Identifying the main challenges and barriers for reducing microplastic waste.
2.Promote recycling of plastic polymers as a substitute for virgin plastic
3. To reduce plastic waste in our target community/location by a certain percentage

Learning outcomes:
Students could identify the challenges and barriers for reducing microplastic waste .

Answer the following:
1.What are microplastics? How are they different from virgin plastics?
2.What are the 2 main causes of microplastics?
3.What are 3 possible ways to solve the problems of microplastics?
4.What is the new EU (European Union) proposal to restrict microplastics
5.How can we as students help in reducing microplastic pollution?
Wealth out of waste:
Make a pen stand/flower vase or any other useful items using any of the 3R techniques. (Use items made of plastic) Rubrics:
Q/A 1 m each
Wealth out of waste: 4m + 1m (4m for the way they used the 3R concept and 1m for the neatness)
Learn and prepare Unit Life process topics completed in class. Practice all the diagrams marked in fair note book.

HOLIDAY HOMEWORK

CLASS XTH

SUBJECT SOCIAL SCIENCE

HISTORY ACTIVITIES

CH-1The Rise of Nationalism in Europe

1. Prepare 6 colourful postcards (3 each) giving separate information about the figures and facts on Mazzini and Bismarck and their contribution in the unification of Italy and Germany.
2. Prepare a poster the contribution of Napoleon Bonaparte and civil code

GEOGRAPHY ACTIVITIES

CH-1 Resources and Development

On the political map of India mark Major soils of India.

AIL PROJECT: Prepare a PPT based on issues 'Sustainable Development' in UP and Arunachal Pradesh /Mizoram steps taken by the government in all the aspects-environmental,social and economical

CH-2 Forest and Wildlife

AIL PROJECT:Collect the data from secondary sources like newspaper and magzine and write an analytical report on Forest Policy and WildLife Act for the conservation of flora and fauna in Arunachal Pradesh and Mizoram by the government and community.

CH-3Water Resources

1. **On political map of India mark Major Dams of India (according to syllabus)**
2. **AIL PROJECTPrepare a poster on the issue of Water Scarcity and Watershed management program in UP, Arunachal Pradesh and Mizoram and write a report on the problem regarding irrigation in UP.**

CH-1Power Sharing

1. **Draw concept map - Different Forms of government in democracy.**
2. **Draw a well labeled pie diagram on ethenic composition of Srilanka and Belgium giving detailed information distribution of power sharing in these countries.**

CH-2 Federalism

Make a collage on The Constitution of India provides a three-fold distribution of legislative powers between Union and state governments

CH- 4 Gender, Religion and Caste

Prepare a video skit of solo or group performance of dance for introductory activity on the topic Relationship between religion and politics.Understand communalism and how communal politics leads to social differences and divisions.

ECONOMICS

CH 1 Development Project on Sustainable Development AIL PROJECT

1. **Do the case study of THE ECONOMIC IMPACT OF G20**
2. **According to following heads prepare a documentary on the issue of economic sustainable development on any one of the topic**

Assessment of implementation of Agenda 21 and the Rio Principles with special reference

OR

Building a Sustainable and Desirable Economy-in-Society-in-Nature in Arunachal

CH-2 Sectors of the Indian Economy

1.Comparing the 3 Sectors with graphical representation. according to chapter

2.Prepare a project to give the innovative ideas Create More Employment in urban and rural sectors.

ARTIFICIAL INTELLIGENCE

HOLIDAY HOME WORK

CLASS X

Moral Issues: Self-Driving Cars

Scenario 1:

Let us imagine that we are in year 2030. Self-Driving cars which are just a concept in today's time are now on roads. People like us are buying them for ease and are using it for our daily transits. Of-course because of all the features which this car has, it is expensive. Now, let us assume, one day a person is going to office in his self-driving car. He is sitting in the back seat as the car is driving itself. Suddenly, a small boy comes in front of this car. The incident was so sudden that the car is only able to make either of the two choices:

1. Go straight and hit the boy who has come in front of the car and injure him severely.

2. Take a sharp right turn to save the boy and smash the car into a metal pole thus damaging the car as well as injuring the person sitting in it.

With the help of this scenario, we need to understand that the developer of the car goes through all such dilemmas while developing the car's algorithm. Thus, here the morality of the developer gets transferred into the machine as what according to him/her is right would have a higher priority and hence would be the selection made by the machine.

If you were in the place of this developer and if there was no other alternative to the situation, which one of the two would you prioritise and why?

Scenario 2:

Let us now assume that the car has hit the boy who came in front of it. Considering this as an accident,

who should be held responsible for it? Why?

1. The person who bought this car

2. The Manufacturing Company

3. The developer who developed the car's algorithm

4. The boy who came in front of the car and got severely injured

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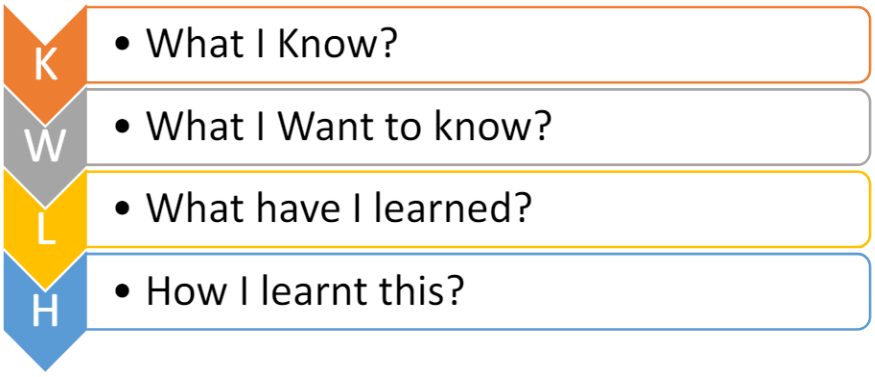
As you can see, Artificial Intelligence is a vast domain. Everyone looks at AI in a different way according to their mindset. Now, according to your knowledge of AI, start filling the KWLH chart:



What do you know about Artificial Intelligence (AI)?

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What do you want to know about AI?

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What have you learnt about AI?

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How have you learnt this about AI?

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ARMY PUBLIC SCHOOL MEERUT CANTT

SUMMER HOLIDAY HOMEWORK

SESSION 2024-2025

CLASS X – INFORMATION TECHNOLOGY (402)

Q1. Design a poster on "Sustainable Development Goals" in Libre office writer by using image and drawing tools. Use the features of styles and templates also.

- **In the document mention the following details:**

❖ **Class**

❖ **Sec**

❖ **Admission Number**

- **Parameters for assessment:**

❖ **Creativity**

❖ **Originality**

❖ **Overall presentation**

- **The completed document in the form of pdf will be uploaded on the following google form link:**

https://forms.gle/8JPxvoZu9UtK1Spa9

Holiday Homework

Marketing & Sales

2024-25

Project to be prepared on following topics: (Any two)

1. Students shall prepare a project on marketing mix (for multiple products) of an organization.

2. Students shall prepare a file containing analysis of types and features of a product being produced by different companies. Data collected shall be justified with marketing fundamentals.
3. A project shall be prepared highlighting the characteristics of products during various stages of product life cycle.
4. A practical file shall be prepared by collecting various sales promotion tools (Coupons, point of sales/web coupons etc.) to increase short term sales and their effects on company's profit and sales volume.
5. Students may choose a few (8-10) products/ services and identify suitable targeting, segmentation and positioning basis for them. A detailed project shall be prepared on the same.
6. Prepare a project on the process of selling by interviewing a salesman in your locality.
7. Identify few firms which practice traditional marketing as well as web -marketing? Create a practical file for the same.
8. PPT on the 4 tools of Marketing mix?

HOLIDAY HOME WORK (PHYSICAL ACTIVITY TRAINER)

2024-2025

Students are instructed to the complete the following Holiday Home Work during Summer Break**:**

NOTE: DO IN A PROJECT FILE

CLASS: X

1. Write about the various activities conducted by the Physical activity facilitator.

2. Plan 5 Physical Activities.

3. Prepare a project file of one Game/sport of your choice.

ग्रीष्मावकाश गृहकार्य–2024–25
विषय–संस्कृत
कक्षा–10

1–गायत्री मन्त्र को हिन्दी अर्थसहित लिखो |

2–अपना परिचय संस्कृत में 5 वाक्यों में लिखो ।

3–संस्कृत की एक कहानी को कॉपी में संस्कृत में ही लिखो ।

4–गीता के पाँच श्लोकों को अर्थसहित लिखो |

6–नेट पर खोज करके संस्कृत के महत्त्व पर 200 शब्दों में एक लेख हिन्दी में लिखो कि इसको पढ़ने से क्या-क्या लाभ हो सकता है ?

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CLASS X

HOLIDAY HOMEWORK (2024-25)

SUBJECT - SCIENCE

PHYSICS:

1) Prepare the tabular display of all the cases of image formation by concave and convex mirror and lens along with proper neat ray diagrams of the same.
2) With proper ray diagram derive the relation between focal length and radius of curvature.
3) Make a systematic chart of all the important formulas and sign convention for mirrors and lens.
4) Make a list of at least ten uses of concave and convex mirrors in our daily life around us.
5) Practice all the numerical thoroughly.

CHEMISTRY:

1) Find the acidic and basic behavior of at least 10 compounds you use in your daily life using natural indicators like turmeric, extract of China rose and one olfactory indicator. Make a report of your observation.
2) Balance the following chemical equations and write the name of the reaction:

   a) $KClO_3$ ------→ $KCl + O_2$

   b) $Pb(OH)_2 + HCl$ ----→ $PbCl_2 + H_2O$

   c) $HNO_3 + NaHCO_3$----→ $NaNO_3 + H_2O + CO_2$

   d) $Al(OH)_3 + H_2SO_4$ ---→ $Al_2(SO4)_3 + H_2O$

   e) $2FeSO_4(s) \rightarrow Fe2O_3 (s) + SO_2(g) + SO_3(g)$

   f) $CaCO_3 (s) \rightarrow CaO (s) + CO_2(g)$

3. Prepare a detailed report on Types of Chemical reactions.

4. Read chapters 1st & 2nd and prepare 10 Questions from each chapter of your own and answer those questions.

- Make a **Multidisciplinary Project** on ‘Important aspect of light in your life near or around you by relating it to different academic subjects’
- Frame 10 **Assertion Reasoning** questions and write their answers from Acid, Bases and Salts and Light Reflection and Refraction.
- Read chapters and prepare 20 Questions which are frequently asked in board examination.