EMRS BUDNI

SUMMER VACATION HOMEWORK

CLASS- 10TH SESSION 2025-026

General Instructions - All sections are compulsory. creative and original. Submit the homework on the first day after vacation reopening. Use neat handwriting; diagrams must be drawn with pencil and ruler.

SECTION - A (SUBJECT- HINDI)

गृहकार्य (कोई 4)

क्र. संक्षिप्त कार्य

1 संवाद लेखन – "ऑनलाइन बनाम ऑफलाइन शिक्षा" या "गर्मी की छुट्टियाँ" पर 15 संवाद

2 हाइकु लेखन – गर्मी, धूप, पेड़, बरसात पर 5 हाइकु (तीन पंक्तियाँ, 17 अक्षर)

3 पाठ सारांश – पुस्तक के किसी एक पाठ (बड़े भाई साहब, तताँरा-वामीरो) का 100 शब्द सारांश

4 वाद-विवाद तर्क – "क्या गर्मी की छुट्टियाँ उपयोगी हैं?" – पक्ष और विपक्ष में 5-5 तर्क

5 स्वयंसेवा डायरी – 3 दिन पौधे लगाने या बुजुर्गों की मदद करने की डायरी (प्रतिदिन 6 वाक्य)

🪄 कक्षा 10 प्रोजेक्ट (कोई 1)

· लघु फिल्म पटकथा – अपनी मूल कहानी पर 8-10 दृश्यों की पटकथा (पात्र, संवाद, स्थान सहित)

· भाषण लेखन + ऑडियो – "हिंदी का वैश्विक महत्व" या "युवा और स्वयंसेवा" पर 2 मिनट का भाषण (लिखित + फोन रिकॉर्डिंग वैकल्पिक)

SECTION - B (SUBJECT- ENGLISH)

1. Read all the prose and poems of your book and identify 5 difficult words from each chapter and find out their meanings on google dictionary.

2. Write a paragraph on ' The delicacies of Summer'

3.Make a attractive chart on any one of the topic given below.

Tense

Narration

Voice

Article

SECTION – C (SUBJECT- S.ST)

EMRS Budni

ग्रीष्मकालीन अवकाश गृहकार्य

कक्षा – X (सामाजिक विज्ञान)

निर्देश – सभी प्रश्न ध्यानपूर्वक पढ़ें और साफ-सुथरे हस्तलेख में उत्तर लिखें। चित्र, मानचित्र और चार्ट का उपयोग करें। यह कार्य अवकाश के बाद जमा करना अनिवार्य हैं।

अध्याय – 1 : यूरोप में राष्ट्रवाद का उदय (The Rise of Nationalism in Europe)

1. राष्ट्रवाद से आप क्या समझते हैं? इसके उदय के कारणों का वर्णन कीजिए।
2. फ्रांसीसी क्रांति और राष्ट्रवाद के बीच संबंध स्पष्ट कीजिए।
3. जर्मनी और इटली के एकीकरण की प्रक्रिया का वर्णन कीजिए।
4. निम्नलिखित प्रमुख घटनाओं को उनके वर्ष के साथ लिखिए :
   (क) फ्रांसीसी क्रांति (ख) नेपोलियन का उदय
   (ग) 1848 की क्रांतियाँ (घ) जर्मनी का एकीकरण
   (ड़) इटली का एकीकरण
5. राष्ट्रवाद के उदय के क्या परिणाम हुए? सकारात्मक और नकारात्मक दोनों पक्ष लिखिए।
6. मानचित्र कार्य : यूरोप के मानचित्र में निम्नलिखित को दर्शाइए और नाम लिखिए –
   (क) फ्रांस (ख) जर्मनी (ग) इटली (घ) ऑस्ट्रिया

गतिविधि (Activity)

किसी एक राष्ट्रवादी नेता (जैसे – गैरीबाल्डी, बिस्मार्क, मैजिनी या माजिनी) का जीवन परिचय लिखिए और उनके चित्र के साथ A4 शीट पर प्रस्तुत कीजिए।

अध्याय – 2 : संसाधन और विकास (Resources and Development)

1. संसाधन किसे कहते हैं? संसाधनों के प्रकार लिखिए।
2. संसाधनों के विकास का क्या महत्व है?
3. संसाधनों के सतत उपयोग (Sustainable Use) का क्या अर्थ हैं? उदाहरण सहित समझाइए।
4. निम्नलिखित संसाधनों के दो-दो उदाहरण लिखिए :
   (क) नवीकरणीय संसाधन (ख) अनवीकरणीय संसाधन
5. संसाधनों के असमान वितरण के कारण क्या हैं? यह विकास को कैसे प्रभावित करता है?
6. मानचित्र कार्य : भारत के मानचित्र में निम्नलिखित को दर्शाइए और नाम लिखिए –
   (क) लौह अयस्क (ख) कोयला (ग) पेट्रोलियम
   (घ) बॉक्साइट (ड़) जल विद्युत परियोजना

गतिविधि (Activity)

किसी एक संसाधन (जैसे – जल, वन, खनिज, मृदा) का चयन कीजिए और उसके उपयोग, महत्व तथा उसके संरक्षण के उपायों पर एक परियोजना (Project) तैयार कीजिए। (कम से कम 1–2 पृष्ठ, चित्र/चार्ट सहित)

विशेष निर्देश –

- स्वच्छ एवं सुंदर लेखन में कार्य करें।
- चित्र, रंग, चार्ट और मानचित्र का उपयोग अवश्य करें।
- मौलिक (Original) कार्य करें। नकल न करें।
- सभी कार्य क्रम से फाइल/फोल्डर में लगाकर जमा करें।

मेहनत आज की, सफलता कल की।
सीखना हर दिन की आदत बनाइए।
आपका उज्ज्वल भविष्य हमारी शुभकामनाओं के साथ।

SECTION – D (SUBJECT- SCIENCE)

Chapters Covered:

1. Chemical Reactions and Equations
2. Life Processes

Homework Instructions:

- You are provided with Previous Year Questions (PYQs) PDFs in the group.
- You must carefully read all questions and write them in your Science notebook along with answers and learn all questions and answers.
- Focus especially on:
  - Important definitions
  - Balanced chemical equations
  - Diagrams
  - Reason-based questions

SECTION – E (SUBJECT- MATHS)

Chapters 1 & 2: Real Numbers & Polynomials

(Based on NCERT)

CASE BASED STUDY QUESTIONS.

CASE BASED STUDY -1

Old age homes mean for senior citizens who are unable to stay with their families or destitute. These old age homes have special medical facilities for senior citizens such as mobile health care systems, ambulances, nurses and provision of well-balanced meals.

Himanshu, Gaurav and Gagan start preparing greeting cards for each person of an old age home on new year. In order to complete one card, they take 10, 16 and 20 min respectively. Based on the above information, solve the following questions:

Q1. Co-prime numbers are those numbers which do not have any common factor other than 1. Is this statement true? (1)

Q2. Find the sum of the powers of all different prime factors of the numbers 10, 16 and 20. (1)

Q3. If all of them started together, then what time will they start preparing a new card together? (2)

OR

What is the common time to make one card? (2)

CASE BASED STUDY - 2

In a morning walk, Naveeka, Arjun and Vedant step off together, their steps measuring 240 cm, 90 cm, 120 cm respectively. They want to go for a juice shop for a health issue, which is situated near by them.

Based on the above information, solve the following questions:

Q1. Factor tree is a chain of factors, which is represented in the form of a tree. Is this statement true? (1)

Q2. Find the sum of the powers of all common prime factors of the numbers 240, 90 and 120. (1)

Q3.(a) Find the minimum distance of shop from where they start to walk together, so that one can cover the distance in complete steps. (2)

Or

Q3.(b) Find the number of common steps covered by all of them to reach the juice shop. (2)

CASE BASED STUDY - 3

A shopkeeper has 420 science stream books and 130 arts stream books. He wants to stack them in such a way that each stack has the same number and they take up the least area of the surface.

Based on the above information, solve the following questions:

Q1. A number has no factor other than 1 and then the number is called ? (1)

Q2. Which mathematical concept is used to solve the problem? (1)

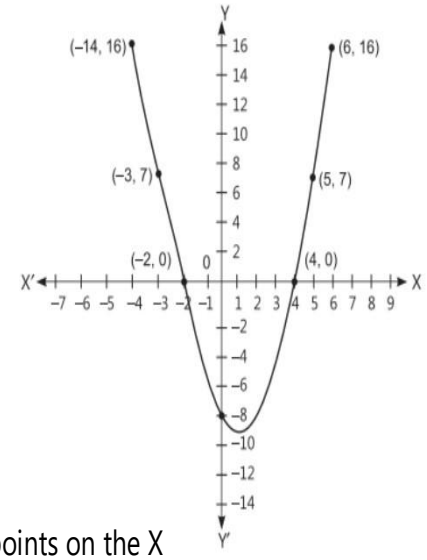
Q3.(a) What is the maximum number of books that can be placed in each stack for this purpose? (2)

Or

Q3.(b) Find the LCM of the given book streams. (2)

CASE BASED STUDY -1

A student was given a task to prepare a graph of quadratic polynomial $p(x)=-8-2x+x^2$. To draw this graph, he take seven values of y corresponding to different values of x. After plotting the points on the graph paper with suitable values, he obtain the graph as shown in the figure:



Based on the graph, solve the following questions:

Q1. What is the shape of graph of a quadratic polynomial? (1)

Q2. Find the zeroes of given quadratic polynomial. (1)

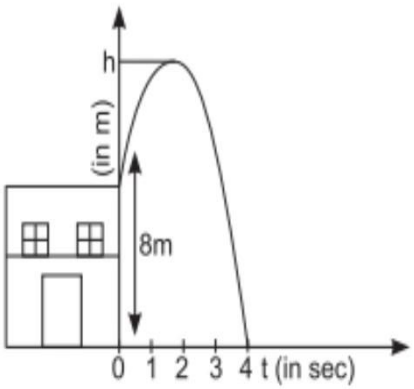
Q3.(a) The graph of the given quadratic polynomial cut at which points on the X axis? (2)

OR

Q3.(b)The graph of the given quadratic polynomial cut at which point on Y-axis? (2)

CASE BASED STUDY - 2

Sukriti throws a ball upwards, from a rooftop which is 8 m high from ground level. The ball reaches to some maximum height and then returns and hit the ground. If height of the ball at time t (in sec) is represented by h(m), then equation of its path is given as $h=-t^2+2t+8$.



Based on the given information, solve the following questions:

Q1. The polynomial represented by above graph is ? (1)

Q2. What are the number of zeroes of the given polynomial ? (1)

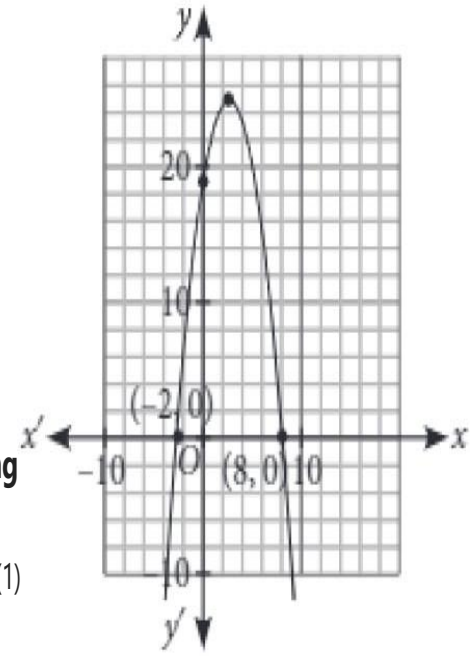
Q3(a). What is the maximum height achieved by ball ? (2)

OR

Q3.(b) What is the time taken by ball to reach maximum height ? (2)

CASE BASED STUDY - 3

Priya and her husband Aman who is an architect by profession, visited France. They went to see Mont Blanc Tunnel which is a highway tunnel between France and Italy, under the Mont Blanc Mountain in the Alps, and has a parabolic cross-section. The mathematical representation of the tunnel is shown in the graph.



Based on the above information, answer the following questions.

Q1. What are the zeroes of the polynomial whose graph is given ? (1)

Q2. What type of polynomial is represented by the graph? (1)

Q3.(a) What will be the expression of the polynomial given in diagram? (2)

OR

Q3.(b) What is the value of the polynomial. represented by the graph, when x = 4? (2)

PROJECT WORK

PROJECT 1: SUPPLY DISTRIBUTION

Objective: **For the hostel mess, we have 510 apples and 92 cartons of milk that need to be divided into identical care packages with no items left over. Calculate the HCF of 510 and 92 to determine the maximum number of packages we can create. Verify mathematically that**

HCF (510, 92) × LCM (510, 92) = 510 × 92.

TEAM – SHIVANI (Leader)

PRIYA

SULOCHANA

SONALI

Submission: *Submit as a neat handwritten project file.*

PROJECT 2: EVENT SYNCHRONIZATION

Objective: **We are scheduling the upcoming EMRS Budni Kala Utsav. Stage A's events rotate every 36 minutes, and Stage B's events rotate every 45**

minutes. Use the prime factorisation method to find the LCM of 36 and 45. After how many minutes will both stages reset at the exact same time?

TEAM – TANISHA (Leader)

NISHA

SUDHA

RADHIKA

Submission: *Submit as a neat handwritten project file.*

PROJECT 3: JUICE STALL

Objective: You have to run a juice stall. You have to make juices of apples, oranges, and mangoes. First collect the number of desired fruits that you are using on your shop. You want to make identical fruit baskets using all the fruits, with each basket having the same number of apples, same number of oranges, and same number of mangoes. What is the largest number of baskets you can make?

TEAM – MAYUR (Leader)

PRINCE

RAHUL

UMANG

Submission: *Submit as a neat handwritten project file.*

PROJECT 4: THE FESTIVAL GIFT BAGS

Objective: Go to your kitchen pantry. Count the exact number of three different types of dry items you have (e.g., count your almonds, biscuits,

and chocolates). You want to pack identical gift pouches for your friends using all of these items without leaving a single one behind. Use the prime factorization method on your three collected numbers to find the maximum number of identical pouches you can make, and detail exactly what goes into one pouch.

TEAM – SUJIT PAKHRE (Leader)

SUJEET

PANKAJ BARELA

SARJAN

Submission: *Submit as a neat handwritten project file.*

PROJECT 5: GARDEN AND PLAYGROUND AREA PROJECT

Objective: In teams, measure the dimensions of any rectangular place such as a garden, classroom floor, playground corner, or parking area. Let the both sides be increased by x metres. Form a polynomial for the area of the new shape. Calculate the actual area for different values of x. Present your findings with drawings and measurements.

TEAM – SARITA (Leader)

PRITI

SAKSHI SALLAM

SARSWATI

Submission: *Submit as a neat handwritten project file.*

PROJECT 6: THE FREE THROW FLIGHT PATH

Objective: Head out to the playground with a ball and a measuring tape. One student throws the ball in a high arc. The other student records the throw on a phone. And one more student measures the exact distance on the ground from where the ball was launched to where it first hit the ground in centimeters. Let the launch point be $x = 0$and your landing measurement be the other zero. Calculate the sum and product of your team's zeroes to write the quadratic polynomial $ax^2 + bx + c$ that represents the physical flight path of your ball.

TEAM – SHAKSHI (Leader)

NEHA

RAJNI

Submission: *Submit as a neat handwritten project file.*

PROJECT 7: THE CARDBOARD ACTIVITY

Objective: Create a large rectangular piece of cardboard. Measure the length and width in centimeters. You are going to build an open-top box by cutting a square of size x from all four corners and folding the sides up. Write out the general cubic polynomial for the volume of your team's specific cardboard: V = x(Length - 2x)(Width - 2x). Expand this into the form $ax^3 + bx^2 + cx + d$. Find the zeroes of this polynomial.

TEAM – SIDDHARTH (Leader)

SHIVAM

LALIT KALME

Submission: *Submit as a neat handwritten project file.*

PROJECT 8 : BADMINTON SHUTTLE PATH PROJECT

Objective: Play badminton in an open area. One student hits the shuttle upward. Another student records the shot, and a third student measures the distance from where it was hit to where it lands. Let these two positions be zeroes of a parabola. Calculate the sum and product of zeroes and create a quadratic polynomial representing the shuttle's path.

TEAM – ROSHAN (Leader)

LALIT

RITESH

VIVEK DHURVE

Submission: *Submit as a neat handwritten project file.*

SECTION – F (SUBJECT- PAT)

1 .कोई भी दो खेल का कोर्ट बनाकर लाना है।

इसे मिट्टी, रेत, गत्ते, बोर्ड या चार्ट पेपर पर बना सकते हैं।

🏀 Basketball court

🏐 Volleyball court

🏸 Badminton court

🤾 Kho-Kho court

🤼 Kabaddi court

⚽ Football Ground

Points(यह सभी points project work में शामिल करने है)

(1) Ground / court ka lebelled diagram (2) Measurements (3) Rules and regulation

SECTION – G (SUBJECT- ART)