VIDYA NIKETAN (BIRLA PUBLIC SCHOOL), PILANI
A Prestigious English Medium Residential School (For Boys)
(CBSE Affl. No. 1730008)
Estd. 1944

English Core

Objective:

To encourage research, analysis, and presentation skills through an extended project as per CBSE English Core guidelines.

Instructions:

1. Choose one topic from the list below.

2. Prepare a detailed project (800–1000 words) on A-4 sheets or project paper for each topic.

3. Include the following in order:
 - Title Page
 - Certificate
 - Acknowledgement
 - Preface
 - Table of Contents
 - Main Content (with headings and subheadings)
 - Conclusion
 - Bibliography

4. You may include relevant images, data, or quotes.

5. Handwritten presentation is preferred.

Choose any two topics:

- Impact of Social Media on Language and Communication

Explore how social media has influenced vocabulary, grammar, spelling, and the way people interact both formally and informally.

- Evolution of English in Indian Cinema

Trace the use of English in Bollywood and regional films. Highlight its influence on youth, pop culture, and language trends.

- Role of English in Career Advancement

Discuss how fluency in English affects employability, interviews, and corporate communication, especially in India.

Submission Date: [July 2nd 2025]

Evaluation Criteria: Creativity, Content, Language, Presentation, and Originality.

IP

1. Project Synopsis:

Project Synopsis:

The synopsis should cover the brief description about the project along with reasons for selection

of the dataset. The learner should write the source of the dataset whether created or taken from

any reliable source. The learner should write what analytics can be done on the project.

Note: Synopsis of the project to be submitted by the students(documentation only, may not submit the code)

COMPUTER SCIENCE WITH PYTHON

1. Solve Networking and MYSQL based questions from AISSCE CBSE Examination question papers (outside Delhi) of COMPUTER SCIENCE (083) year 2022 to 2025 available on www.cbseacademic.in/ www.cbse.nic.in website.

2. Prepare Practical File with minimum 25 Program on Python Language and minimum 5 tables in SQL. List of program is provided on your Personal Mail.

DATA SCIENCE

Read the chapter of classification and regression algorithm from book.

PAINTING STUDENTS

All Painting students of Class XII are hereby informed that they must submit their **Practical Portfolio** immediately after the summer vacation. The details of the required submissions are as follows:

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1. Still Life Paintings

- **Total Assignments**: 6
  - 5 on **A3-size paper**
  - 1 on **canvas**
- **Medium**: Water or Acrylic Colours
- **Note**: Refer to classwork instructions for important guidance
- **2. Painting Composition**
- **Total Assignments**: 6
- 5 on **paper**
- 1 on **canvas**
- **Medium**: Water or Acrylic Colour
- **Instructions**:
- Use at least **three human figures** in each composition.
- Include **perspective**, **background**, and **colour harmony**.
- Focus on **innovation**, **creativity**, and **composition** principles.
- **Choose any 6 topics from the list below**:

  1. Indian Railway Station Scene
  2. Vegetable Market Scene (Contemporary)
  3. Indian Labourers & Street Vendors
  4. Nature and Human Interaction
  5. Physical Workout at Home
  6. Yoga and Meditation at Home
  7. Three Musicians
  8. Bus Stand Scene
  9. Me & My Family Working Together at Home *(Collective Awareness)*

3. Sketching and Drawing

- **Sketches**: 25 skilful sketches
- **Drawings**: 10 finished drawings
- **Size**: A5 sketching pad
- **Medium**: Pencil or Black Pen
- **Topics**: Human Figures, Man-made Objects, Nature

4. Landscapes

- **Total Assignments**: 5
  - 2 on **canvas**
  - 3 on **paper**
- **Medium**:
  - **Acrylic** for canvas
  - **Watercolour** for paper
- **Focus Areas**: Light and shade, proportion, creativity, compositional sense, and neatness

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Important Instructions

- On the **back of each assignment**, write clearly:
  - Name
  - Class & Section
  - Subject
  - Topic
  - Medium used
  - Date
- **Submit on time**.

CHEMISTRY

1. Complete your allotted investigatory project (hand written). Project file should contain pages in following order:

a. Index

b. Aim of Project

c. Introduction

d. Theory

e. Apparatus Required

f. Procedure

g. Observation

h. Conclusion

i. Precaution

j. Bibliography

2. Make a list of all the formulae related to Chapter 1 (Solutions) and Chapter 2 (Electrochemistry) in your notebook.

3. Read the chapters (Chapter 1 and 2) from NCERT book and solve all the problems from NCERT text book exercise.

HUMANITIES(GEOGRAPHY)

DO IN GEOGRAPHY NOTEBOOK

1. Make a Report on the problems of the Slum "Dharavi" in Mumbai and the importance of Indira Gandhi Canal.

2. On the Maps of World, Mark the following

    1.Important Airports

    2.Important Sea Ports

    3.Panama Canal and Suez Canal

3. Prepare a Report on "Rising population of India and it's Impact" for 11th July presentation.

HISTORY

Here are some project ideas for Class 12 History students (CBSE):

Project Ideas:

1. *Timeline of Indian History:* Create a timeline highlighting major events, dynasties, and cultural developments in Indian history from ancient to modern times.

2. *Historical Figure Study:* Choose a historical figure (e.g., Ashoka, Akbar, Gandhi) and research their life, contributions, and impact on Indian history.

3. *Comparative Analysis of Historical Events:* Compare and contrast two significant historical events (e.g., French Revolution and Russian Revolution) or movements (e.g., Indian Independence Movement and Civil Rights Movement in the USA).

4. *Cultural Heritage of India:* Document and showcase India's cultural heritage, including monuments, art forms, festivals, or traditions.

5. *Impact of Colonialism:* Research and analyze the impact of colonialism on Indian society, economy, and culture.

6. *Historical Site Study:* Choose a historical site (e.g., Hampi, FatehpurSikri, Red Fort) and research its history, architecture, and significance.

7. *Role of Women in Indian History:* Explore the contributions and experiences of women in Indian history, highlighting their impact on society and culture.

Project Requirements:

1. *Research:* Conduct thorough research using credible sources (books, articles, primary documents).

2. *Content:* Present information in a clear, concise, and organized manner.

3. *Visuals:* Incorporate relevant images, maps, diagrams, or charts to enhance the project.

4. *Citation:* Properly cite sources using a recognized citation style (e.g., MLA, APA).

5. *Presentation:* Prepare a clear, engaging presentation to showcase the project.

Assessment Criteria:

1. *Content (40%):* Depth, accuracy, and relevance of information.

2. *Organization and Structure (20%):* Logical flow, clarity, and coherence.

3. *Visuals and Presentation (20%):* Effectiveness of visuals, presentation skills, and engagement.

4. *Research and Citation (20%):* Quality of research, proper citation, and academic integrity.

Students are requested to choose one topic and present the project in project file after summer vacation.

ENTREPRENEURSHIP

Part A: Project Work
NOTE: Business plan and Market survey on the same topic only

Option 1: Business Plan

Title (product choose per your choice): Eco Boost – A Sustainable Delivery Service for College Campuses
Brief: Create a business plan for an eco-friendly, electric-bike-based delivery startup that caters to students and small campus businesses.

Option 2: Market Survey
Title: Youth & Fitness – A Survey on Demand for Affordable Gyms
Brief: Conduct a survey among students (and parents) to understand their fitness habits, preferences, and interest in affordable health clubs or home fitness programs.

Guidelines to Develop the Project (25+ Pages):
1. Title Page – Include topic, student details, school, and date.
2. Acknowledgment
3. Certificate (by teacher)
4. Introduction – Explain what the project is about.
5. Objective of the Study/Business Idea
6. Collection of Data/Research

For Business Plan: Do interviews or questionnaires for demand analysis.

For Survey: Collect responses (minimum 50) using Google Forms or printed questionnaires.
7. Organization & Presentation of Data – Use tables, pie charts, graphs
8. Analysis & Interpretation – What does the data suggest? Any trends or surprises?
9. Conclusion – What did you learn? Is your idea feasible?
10. Bibliography/References
11. Appendix (Include survey questionnaire, charts, etc.)
> Add creativity by using colored visuals, charts, QR codes linking to short interviews, and interactive elements like info graphics.

Part B: Conceptual Questions

(1) What is meant by 'Sensing Entrepreneurial Opportunities'?
(2) Three Steps in Sensing Entrepreneurial Opportunities
(3) Flow Diagram: Process of Setting up an Enterprise
(4) What do you mean by 'Idea Field'? Explain Five Types:

BUSINESS STUDIES

BPS Business Brilliance

Welcome to the CEO Boot camp – Get ready to lead, manage, and market like a pro!

1. Project Power Play: Be the Boss!
Choose your battlefield – one of the following business zones:
Principles of Management – Become a mini Henry Fayol!
Marketing Management – Create your own product and sell the dream!
Business Environment – Analyze the forces that shape businesses every day.
Stock Exchange – Dive into the thrilling world of shares, bulls, and bears!
Project Guidelines:
Length: Minimum 30 pages
Creativity: Charts, data, real-life examples, interviews, and visuals encouraged
Purpose: This is your ticket to CBSE practical – so make it impactful!

2. Master class Module 1: Back to Basics
Unit 1: Nature and Significance of Management
Revise all core concepts
Answer ALL questions at the end of the chapter
Solve case study-based questions like a corporate strategist
Practice previous year CBSE board questions
Tip: Make mind maps or flashcards for quick memory boosts!

3. Case study
Complete the Unit 1 and 2 case study from Alka dhawan book
Use colors or sticky notes to make it more engaging

4. Quick fire Round:
The MCQ & Sample Sprint
Go through all Multiple-Choice Questions at the end of Unit 1 and 2

HINDUSTANI MUSIC (PER) INSTRUMENTAL

S.NO	CLASS	PROJECT/ Non Project
1.	XII(6th subject)	Comparative Study (Non Project)
2.	XII (6th subject)	Origin of Tabla Or Pakhawaj, (Project)
3.	XII (6th Subject)	Table ke Vibhinna Gharane ewam Vadan Shailiya (Project)
4.	XII(6th Subject)	Writing practice of Prescribed Taal in Taal Notation System Notation (Non Project)
5.	XII(6th Subject)	Laya and Layakari Project

BIOLOGY

(1) A project(observatory)on different food items (Home made) which are prepared by fermentation process which happens because of the involvement of microorganisms.

(2) A project on the following given topics (any one)-

(A) Biotechnology and its applications.

(B) Reproductive health.

(C) Biodiversity in India.

(D) The uses of different kind of microbes in our life.

(3) The revision of syllabus and question bank (MCQ) has been taught.

ECONOMICS

Find the project title which have been assigned.

Do the CBSE project on the topics provided. All details related to project is mentioned in the textbook. "

Student Name	Assigned Project Topic
ABHINAV JHA	Impact of GST on the Indian Economy
ADITYA BANSAL	Impact of GST on the Indian Economy
ANSHUMAAN YADAV	Impact of GST on the Indian Economy
ARNAV GOYAL	Make in India – A Critical Analysis
ARYAN SANDIPBHAI KAILA	Make in India – A Critical Analysis
ASHISH AGARWAL	Make in India – A Critical Analysis
DEEPAK GODARA	Digital India and its Impact on Employment
DEV SORIYA	Digital India and its Impact on Employment
HARSH AMBAWATA	Digital India and its Impact on Employment
HITMAY AGARWAL	Startup India – Growth, Challenges and Future
IDHAM SINGLA	Startup India – Growth, Challenges and Future
KARAN GARG	Startup India – Growth, Challenges and Future
MEHUL KUMAR NEWATIA	Atmanirbhar Bharat – Vision and Implementation
PIYUSH KUMAR MOTANI	Atmanirbhar Bharat – Vision and Implementation
RAGHVAN GARG	Atmanirbhar Bharat – Vision and Implementation
SHIVAM CHOUDHARY	Unemployment in India – Trends and Solutions
SHIVANSH PAWAR	Unemployment in India – Trends and Solutions
SHIVANSH SHUKLA	Unemployment in India – Trends and Solutions
SUMEET KUMAR	Poverty Alleviation Programs in India
TANMAY SANKHLA	Poverty Alleviation Programs in India
YUVRAJ DINESHKUMAR RAJPUROHIT	Poverty Alleviation Programs in India
ANIKET SINGH	Impact of COVID-19 on the Indian Economy
HIMANSHU	Impact of COVID-19 on the Indian Economy
RAJNEESH	Impact of COVID-19 on the Indian Economy
RANIDAN SINGH JODHA	Agricultural Reforms and Their Impact on Farmers
SHUBHAM DAYMA	Agricultural Reforms and Their Impact on Farmers
VASU VEENA	Agricultural Reforms and Their Impact on Farmers
SAI GOBIND KESHRI	Role of MSMEs in Indian Economic Growth
YUVANSH CHENKA	Role of MSMEs in Indian Economic Growth
AARAV SHUKLA	India’s Balance of Payments – Recent Trends
MEET RAJ	India’s Balance of Payments – Recent Trends
ABHIRAAJ JAGGIA	Role of MSMEs in Indian Economic Growth
ADITYA MODI	Foreign Direct Investment (FDI) in India
ADITYA VERMA	Foreign Direct Investment (FDI) in India
DEV SINGH	Foreign Direct Investment (FDI) in India
DHAIRYA MANGAL	Economic Inequality in India – Causes and Remedies
DHRUV GARG	Economic Inequality in India – Causes and Remedies
GAUTAM	Economic Inequality in India – Causes and Remedies
HARSHIT SURANA	Inflation and Its Effect on Indian Households
NAITIK GARG	Inflation and Its Effect on Indian Households
OJAS SINGH	Inflation and Its Effect on Indian Households
PUSHKAR MURARKA	Environmental Cost of Economic Growth in India
RISHABH AGRAWAL	Environmental Cost of Economic Growth in India
SHIVAM SHARMA	Environmental Cost of Economic Growth in India
SHUBHRAJ KASLIWAL	Women Empowerment through Economic Policies

SUMIT RANA	Women Empowerment through Economic Policies
TARUN YADAV	Women Empowerment through Economic Policies
VISHESH GOEL	Green Economy and Sustainable Development in India
YUVRAJ KUMAR PODDAR	Green Economy and Sustainable Development in India

MATHS

For all the three project make one file

Project Title: Applications of Matrices in Real Life

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Following points have to be included
Objective:

1. Introduction to Matrices

Definition of a matrix

Types of matrices (row, column, square, diagonal, identity, zero matrix)

Notation and dimensions (order of a matrix)

2. Basic Operations

- Addition and subtraction
- Scalar multiplication
- Matrix multiplication (rules and examples)
- Transpose of a matrix

3. Determinants and Inverse

- How to calculate the determinant of a 2x2 and 3x3 matrix
- Conditions for matrix invertibility
- Finding the inverse of a matrix (using adjoint and determinant)

4. Conclusion

Project : Real-Life Applications of Relations and Functions

Following points Have To be included

Objective

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1. Introduction

- What is a relation?
- What is a function?
- Difference between a relation and a function
- Domain, codomain, and range explained with examples

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2. Types of Relations

Empty relation

Universal relation

Identity relation

Reflexive, Symmetric, Transitive, and Equivalence Relations (with examples)

Real-life example: Family relationships, social networks

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3. Types of Functions

One-one (Injective)

Onto (Surjective)

One-one onto (Bijective)

Constant function

Identity function

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4. Representation of Functions

Arrow diagrams

Graphical representation

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5. Case Study / Activity

- **Age-based Function**: Define a function that maps people to their birth year.
- **Social Network Graph**: Show user-to-user relationships and classify them as relations.

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6. Conclusion

Project : Inverse Trigonometric Functions

Following Points have to be included

1.Objective 2.Introduction 3.Early trigonometry 4.European Renaissance 5. Development of modern inverse trigonometric functions 6.Modern Usage 7.Graphs of inverse trigonometry function with domain and range 8.Conclusion

CASE STUDY 1:

A general election of Lok Sabha is a gigantic exercise. About 911 million people were eligible to vote and voter turnout was about 67%, the highest ever

ONE – NATION
ONE – ELECTION
FESTIVAL OF
DEMOCRACY
GENERAL ELECTION –
2019

Let I be the set of all citizens of India who were eligible to exercise their voting right in general election held in 2019. A relation 'R' is defined on I as follows:

R = $\{(V1, V2) : V1, V2 \in I$ and both use their voting right in general election – 2019$\}$

1. Two neighbors X and Y∈ I. X exercised his voting right while Y did not cast her vote in general election – 2019. Which of the following is true?

a. (X,Y) ∈R
b. (Y,X) ∈R
c. (X,X) ∉R
d. (X,Y) ∉R

2. Mr.'X' and his wife 'W'both exercised their voting right in general election -2019, Which of the following is true?

a. both (X,W) and (W,X) ∈ R
b. (X,W) ∈ R but (W,X) ∉ R
c. both (X,W) and (W,X) ∉ R
d. (W,X) ∈ R but (X,W) ∉ R

3. Three friends F_1, F2 and F_3 exercised their voting right in general election-2019, then which of the following is true?

a. (F1,F2) ∈R, (F2,F3) ∈ R and (F1,F3) ∈ R
b. (F1,F2) ∈ R, (F2,F3) ∈ R and (F1,F3) ∉ R
c. (F1,F2) ∈ R, (F2,F2) ∈R but (F3,F3) ∉ R
d. (F1,F2) ∉ R, (F2,F3) ∉ R and (F1,F3) ∉ R

4. The above defined relation R is _____

a. Symmetric and transitive but not reflexive

b. Universal relation

c. Equivalence relation

d. Reflexive but not symmetric and transitive

5. Mr. Shyam exercised his voting right in General Election – 2019, then Mr. Shyam is related to which of the following?

a. All those eligible voters who cast their votes

b. Family members of Mr.Shyam

c. All citizens of India

d. Eligible voters of India

CASE STUDY 2

Sherlin and Danju are playing Ludo at home during Covid-19. While rolling the dice, Sherlin's sister Raji observed and noted the possible outcomes of the throw every time belongs to set {1,2,3,4,5,6}. Let A be the set of players while B be the set of all possible outcomes.

A = {S, D}, B = {1,2,3,4,5,6}

1. Let $R : B \to B$ be defined by R = $\{(x, y): y \text{ is divisible by } x\}$ is

a. Reflexive and transitive but not symmetric

b. Reflexive and symmetric and not transitive

c. Not reflexive but symmetric and transitive

d. Equivalence

2. Raji wants to know the number of functions from A to B. How many number of functions are possible?

a. 6^2

b. 2^6

c. 6!

d. 2^{12}

3. Let R be a relation on B defined by R = {(1,2), (2,2), (1,3), (3,4), (3,1), (4,3), (5,5)}. Then R is

a. Symmetric

b. Reflexive

c. Transitive

d. None of these three

4. Raji wants to know the number of relations possible from A to B. How many numbers of relations are possible?

   a. 6^2

   b. 2^6

   c. 6!

   d. 2^{12}

5. Let $R: B \to B$ be defined by R={(1,1),(1,2), (2,2), (3,3), (4,4), (5,5),(6,6)}, then R is

   a. Symmetric

   b. Reflexive and Transitive

   c. Transitive and symmetric

   d. Equivalence

Students of Grade 9, planned to plant saplings along straight lines, parallel to each other to one side of the playground ensuring that they had enough play area. Let us assume that they planted one of the rows of the saplings along the line $y = x - 4$. Let L be the set of all lines which are parallel on the ground and R be a relation on L.

Answer the following using the above information.

1. Let relation R be defined by R = $\{(L1, L2): L1 \parallel L2$ where $L_1, L_2 \in L\}$ then R is_____ relation

a. Equivalence

b. Only reflexive

c. Not reflexive

d. Symmetric but not transitive

2. Let R = $\{ (L1, L2) : L1 \perp L2$ where $L1, L2 \in L \}$ which of the following is true?

a. R is Symmetric but neither reflexive nor transitive

b. R is Reflexive and transitive but not symmetric

c. R is Reflexive but neither symmetric nor transitive

d. R is an Equivalence relation

3. The function f: R→R defined by $f(x) = x - 4$ is_____

a. Bijective

b. Surjective but not injective

c. Injective but not Surjective

d. Neither Surjective nor Injective

4. Let $f: R \to R$ be defined by $f(x) = x - 4$. Then the range of $f(x)$ is _____

a. R

b. Z

c. W

d. Q

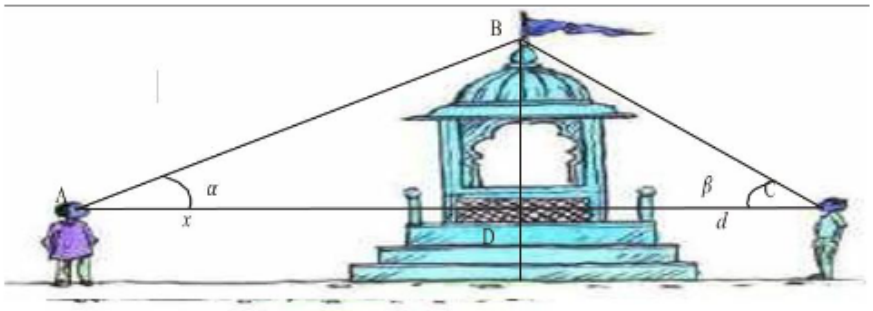
5. Let R = {(L_1, L_2) : L_1 is parallel to L_2 and L_1 : y = x – 4} then which of the following can be taken as L_2?

a. 2x-2y+5=0

b. 2x+y=5

c. 2x + 2y + 7 =0

d. x+y=7



Two men on either side of a temple of 30 meters high observe its top at the angles of elevation α and β respectively. (as shown in the figure above). The distance between the two men is $40\sqrt{3}$ meters and the distance between the first person A and the temple is $30\sqrt{3}$ meters. Based on the above information answer the following:

1. $\angle CAB = \alpha =$
   a. $\sin^{-1}\left(\frac{2}{\sqrt{3}}\right)$
   b. $\sin^{-1}\left(\frac{1}{2}\right)$
   c. $\sin^{-1}(2)$
   d. $\sin^{-1}\left(\frac{\sqrt{3}}{2}\right)$
2. $\angle CAB = \alpha =$

a. $\cos^{-1}\left(\frac{1}{5}\right)$

c. $\cos^{-1}\left(\frac{\sqrt{3}}{2}\right)$

d. $\cos^{-1}\left(\frac{4}{5}\right)$

3. $\angle BCA = \beta =$

a. $\tan^{-1}\left(\frac{1}{2}\right)$

b. $\tan^{-1}(2)$

c. $\tan^{-1}\left(\frac{1}{\sqrt{3}}\right)$

d. $\tan^{-1}(\sqrt{3})$

4. $\angle ABC =$

a. $\frac{\pi}{4}$

b. $\frac{\pi}{6}$

c. $\frac{\pi}{2}$

d. $\frac{\pi}{3}$

3

5. Domain and Range of $\cos^{-1} x =$

a. $(-1, 1), (0, \pi)$

b. $[-1, 1], (0, \pi)$

c. $[-1, 1], [0, \pi]$

d. $(-1, 1), \left[-\frac{\pi}{2}, \frac{\pi}{2}\right]$

A manufacture produces three stationery products Pencil, Eraser and Sharpener which he sells in two markets. Annual sales are indicated below

Market	**Products (in numbers)**		
	Pencil	**Eraser**	**Sharpener**
A	**10,000**	**2000**	**18,000**
B	**6000**	**20,000**	**8,000**

If the unit Sale price of Pencil, Eraser and Sharpener are Rs. 2.50, Rs. 1.50 and Rs. 1.0 respectively, and unit cost of the above three commodities are Rs. 2.00, Rs. 1.00 and R 0.50 respectively, then,

Based on the above information answer the following:

1. Total revenue of market A

a. Rs. 64,000

b. Rs. 60,400

c. Rs. 46,000

d. Rs. 40600

2. Total revenue of market B

a. Rs. 35,000

b. Rs. 53.000

c. Rs. 50,300

d. Rs. 30,500

3. Cost incurred in market A

a. Rs. 13,000

b. Rs.30,100

c. Rs. 10,300

d. Rs. 31,000

4. Profit in market A and B respectively are

a. (Rs. 15,000, Rs. 17,000)

b. (Rs. 17,000, Rs. 15,000)

c. (Rs. 51,000, Rs. 71,000)

d. (Rs. 10,000, Rs. 20,000)

5. Gross profit in both market

a. Rs.23,000

b. Rs. 20,300

c. Rs. 32,000

d. Rs. 30,200

On her birth day, Seema decided to donate some money to children of an orphanage home. If there were 8 children less, everyone would have got Rs.10 more. However, if there were 16 children more, everyone would have got Rs. 10 less. Let the number of children be x and the amount distributed by Seema for one child be y (in Rs.).

Based on the information given above, answer the following questions:

1. The equations in terms x and y are

a. 5x-4y = 40

b. 5x-4y = 40

   5x-8y = 80

c. 5x-4y = 40

   5x+8 y= -80

d. 5x+4y = 40

   5x-8y = -80

2. Which of the following matrix equations represent the information given above?

1. $\begin{bmatrix} 5 & 4 \\ 5 & 8 \end{bmatrix} \begin{bmatrix} x \\ y \end{bmatrix} = \begin{bmatrix} 40 \\ -80 \end{bmatrix}$

2. $\begin{bmatrix} 5 & -4 \\ 5 & -8 \end{bmatrix} \begin{bmatrix} x \\ y \end{bmatrix} = \begin{bmatrix} 40 \\ 80 \end{bmatrix}$

3. $\begin{bmatrix} 5 & -4 \\ 5 & -8 \end{bmatrix} \begin{bmatrix} x \\ y \end{bmatrix} = \begin{bmatrix} 40 \\ -80 \end{bmatrix}$

4. $\begin{bmatrix} 5 & 4 \\ 5 & -8 \end{bmatrix} \begin{bmatrix} x \\ y \end{bmatrix} = \begin{bmatrix} 40 \\ -80 \end{bmatrix}$

3. The number of children who were given some money by Seema, is

a. 30

b. 40

c. 23

d. 32

4. How much amount is given to each child by Seema?

a. Rs. 32

b. Rs. 30

c. Rs. 62

d. Rs. 26

5. How much amount Seema spends in distributing the money to all the students of the Orphanage?

a. Rs. 609

b. Rs. 960

c. Rs. 906

d. Rs. 690

Two farmers Ramakishan and Gurucharan Singh cultivate only three varieties of rice namely Basmati, Permal and Naura. The sale (in rupees) of these varieties of rice by both the farmers in the month of September and October are given by the following matrices A and B

September sales (in Rupees)

$$A=\begin{bmatrix}10{,}000 & 20{,}000 & 30{,}000\\ 50{,}000 & 30{,}000 & 10{,}000\end{bmatrix}\begin{matrix}Ramakishan\\ Gurucharan\end{matrix}$$

October sales (in Rupees)

$$B=\begin{bmatrix}5{,}000 & 10{,}000 & 6{,}000\\ 20{,}000 & 10{,}000 & 10{,}000\end{bmatrix}\begin{matrix}Ramakishan\\ Gurucharan\end{matrix}$$

1. The total sales in September and October for each farmer in each variety can be represented as _____..

a. A+B

b. A-B

c. A> B

d. A< B

2. What is the value of A_{23}?

a. 10000

b. 20000

c. 30000

d. 40000

3. The decrease in sales from September to October is given by _____ .

a. A+B

b. A-B

c. A> B

d. A< B

4. If Ramkishan receives 2% profit on gross sales, compute his profit for each variety sold in October.

a. Rs. 100, Rs. 200 and Rs. 120

b. Rs. 100, Rs. 200 and Rs. 130

c. Rs. 100, Rs. 220 and Rs. 120

d. Rs. 110, Rs. 200 and Rs. 120

5. If Gurucharan receives 2% profit on gross sales, compute his profit for each variety sold in September.

a. Rs. 100, Rs. 200, Rs. 120

b. Rs. 1000 , Rs. 600, Rs. 200

c. Rs. 400, Rs. 200, Rs. 120

d. Rs. 1200, Rs. 200, Rs. 120

PHYSICS

1. Prepare a Investigatory Project report on One of the following topics for the Internal Assessment in Final Practical Examinations.

Suggested Investigatory Projects

1. To study various factors on which the internal resistance/EMF of a cell depends.
2. To study the variations in current flowing in a circuit containing an LDR because of a variation in (a) the power of the incandescent lamp, used to 'illuminate' the LDR (keeping all the lamps at a fixed distance). (b) the distance of an incandescent lamp (of fixed power) used to 'illuminate' the LDR.
3. To find the refractive indices of (a) water (b) oil (transparent) using a plane mirror, an equiconvex lens (made from a glass of known refractive index) and an adjustable object needle.
4. To investigate the relation between the ratio of (i) output and input voltage and (ii) number of turns in the secondary coil and primary coil of a self-designed transformer.
5. To investigate the dependence of the angle of deviation on the angle of incidence using a hollow prism filled one by one, with different transparent fluids.

6. To estimate the charge induced on each one of the two identical Styrofoam (or pith) balls suspended in a vertical plane by making use of Coulomb's law.
7. To study the factor on which the self-inductance of a coil depends by observing the effect of this coil, when put in series with a resistor/(bulb) in a circuit fed up by an A.C. source of adjustable frequency.
8. To study the earth's magnetic field using a compass needle -bar magnet by plotting magnetic field lines and tangent galvanometer

2. Revise and Practice questions on the topics covered in the months of April and
   May 25 before summer vacations. Focus more on competency Based questions.

PHYSICAL EDUCATION

Project file on One Major game with History of the game, rules and regulations, Marking of the court or field, terminology and personality with awards, yoga and SAI fitness test.

LIBRARY

Senior Section Library			
Suggested books for reading in Summer vacation			
Books lists for Inter House Library Competition 2025-2026			
S.N.	**NAME OF BOOK**	**AUTHOR NAME**	**REMARK**
1	The Alchemist	Paulo Coelho	
2	The da vinci code	**Dan Brown**	
3	The trials of Apollo: The Burning Maze	Rick Riordan	
4	DIARY OF A WIMPY KID: DOUBLE DOWN	Jeff Kinney	
5	Beyond 2020	APJ Abdul Kalam	
6	mission india.	APJ Abdul Kalam	
7	HOW TO THINK LIKE STEPHEN HAWKING	Daniel Smith	
8	Breaking Dawn	**Stephenie Meyer**	
9	New moon	Stephenie Meyer	
10	The Immortals of Meluha	Amish Tripathi	
11	IKIGAI: The Japanese Secret To A Long & Happy Life	Francesc Miralles and Hector Garcia	
12	WHY BHARAT MATTERS	S. Jaishankar	
13	THE ART OF THINKING CLEARLY	Rolf Dobelli and Caroline Waight	
14	THE LEADER WHO HAD NO TITLE	Robin Sharma	
15	harry potter and the philosopher's stone	J.K. Rowling	
16	Eclipse	Stephenie Meyer	
17	Percy Jackson and the Last Olympian	Rick Riordan	
18	Kalpana Chawla : a life	Anil Padmanabhan	
19	Sewasadan (Hindi)	Prem Chandra	
20	I Dare	Kiran Bedi	
21	Haldighati Ka Yaudhya: Maharana Pratap Hindi	Vedpal Singh Jatuwas	

ACCOUNTANCY

1. Draw a Format of Company Balance Sheet and Statement of Profit and Loss.

2. Write about the following Terms about the Analysis of Financial Statement of Company.

(i) Horizontal Analysis / Vertical Analysis

(ii) Intra Firm / Inter Firm Analysis

3. Prepare a Accountancy project as per the CBSE guidelines.

4. Write the short note on the following :-

(i) Authorized Share capital

(ii) Issued Share Capital

(iii) Called up Share Capital

(iv) Subscribed Share Capital

(v) Share Option outstanding Account

(vi) Operating Cycle

5. Discuss the uses of Financial Statement Analysis.

(i) Security Analysis

(ii) Credit Analysis

(iii) Debt Analysis

6. Practice 10 questions of Comparative and Common Size Statement (Balance Sheet and Statement of Profit and loss.

7. Practice MCQs and Numerical Questions of Ratio Analysis.