



BRILLIANTS' CONVENT

Class XII

2025-26



**SUMMER HOLIDAY
HOMEWORK**

GENERAL INSTRUCTIONS (FOR ALL SUBJECTS):

- Section A will do the task based on Andaman and Nicobar Islands.
- Section B will do the task on Sikkim.
- Section C will do the task on Lakshadweep Islands.
- A question based on NEP 2020 (remaining questions) is compulsory for all students.

ENGLISH

1. “The Rattrap Redemption Retreat” Brochure

Design a “Rattrap Redemption Retreat” brochure set in Andaman and Nicobar Islands/ Sikkim/ Lakshadweep Islands, offering a program where lost or troubled souls can rediscover positive human attributes.

Inspired by The Rattrap, this brochure imagines a healing retreat, where people burdened by guilt, loneliness, or life’s hardships can rediscover kindness, trust, and inner peace. It ties in beautifully with the story’s central themes: human compassion, second chances, and transformation.

Brochure Details:

- Total Pages: 6–8
- Spiral bound
- Creative and Visually appealing

Page 1: Cover Page

Title:

“The Rattrap Redemption Retreat

Tagline:

“Where Every Heart Finds Its Way Home.”

Page 2: About the Retreat

- A brief description of the retreat’s purpose: helping troubled souls (just like the rattrap peddler) find hope, redemption, and belonging.
- Explanation of why the respective area was chosen: its serenity, isolation, and natural beauty make it ideal for reflection and healing.
- A quote from The Rattrap (e.g., “The world is nothing but a big rattrap.”)

Page 3: Programs & Activities

- Reflection Circles: Group discussions around themes of trust, forgiveness, and kindness.
- Nature Walks: Guided tours on the island, linking to metaphors of life’s journey.
- Kindness Missions: Activities like local community service to build empathy.
- Creative Writing: Journal sessions to express regrets, hopes, and learnings.
- Storytelling Nights: Sharing personal stories around bonfires, inspired by The Rattrap’s transformation moment.

Page 4: Accommodation & Facilities

- Details of lodging, food (simple, nutritious meals), and wellness services like yoga and meditation.
- Emphasis on a simple, no-frills life to disconnect from worldly traps.

Page 5: Success Stories

Imaginary Testimonials:

Short success stories of “past attendees” who turned their lives around—paralleling the peddler’s journey.



Example:

"I arrived lost and angry. I left believing in kindness again." – Raj, Mumbai.

Page 6: Link to the Story

- A reflection on The Rattrap—how this retreat echoes the peddler's transformation.
- Encourage visitors to read the story or reflect on its lessons while at the retreat.

Page 7: FAQs and Contact

- Common questions:
- Who can join?
- How long is the retreat?
- What should I bring?
- Safety & eco-friendly policies.
- Contact details (imaginary):
- Email, phone, and website.
- Map of Andaman and Nicobar Islands/ Sikkim/ Lakshadweep Islands.

Page 8: Back Cover

- A peaceful visual of sparrows (linking to the kindness shown by the ironmaster's daughter).
- A final slogan:
"Escape the rattrap. Find yourself again."

2. Project Work

Q1 To be done by EVEN ROLL NUMBERS

Q2 To be done by ODD ROLL NUMBERS

1. Project Topic: "Explore the Departments of a Modern-Day Film Studio: A Comparative Study with Gemini Studios"

Project Question: Explore the various departments and roles within a modern-day film studio or media house. Prepare a detailed project showcasing at least 5 key departments (e.g., makeup, direction, scriptwriting, cinematography, editing) and explain how these relate to the functioning of the Gemini Studios as described in your *FLAMINGO* lesson 'Poets and Pancakes.' Include interviews (if possible), photos, or diagrams to enhance your project.

2. Project Topic: "Mastering the Art of the Interview: A Practical Guide"

Project Question: Prepare a comprehensive guide on how to conduct an effective interview. Your project should include types of interviews, skills needed for a good interview, a sample set of questions for a famous personality, and a reflection on the challenges and ethics of interviewing, linking your findings to the insights shared in your *FLAMINGO* lesson 'The Interview.'

IMPORTANT:

Project Must Include:

- Cover Page: Title of the project, school details, and student details.
- Index
- Acknowledgement
- Statement of Purpose/Objectives/Goals.
- Certificate of Completion under the guidance of your teacher.



- Content
- About a Film Studio/ What is an interview? How to conduct an interview?
- Comparative study of various departments/ Scripts for interviews
- Relation with the lesson/ Questionnaires of famous interviews
- Written assignments, essays, survey reports, and other material evidence of your learning progress and academic accomplishment.
- Main Essay/Report (800–1000 words).
- Student Reflections on what you learned through this project.
- Photographs that capture your positive learning experiences.
- List of Resources/Bibliography.
- Should be at least 25 pages, creativity and presentation should be up to the mark.
- To be submitted in a covered ring file.

PHYSICS

1. Discuss the principle of Buoyancy and relate it to traditional boats (dugouts / canoes) used by local tribes in Andaman.
2. Investigatory Projects on any one topic
 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 a 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

CHEMISTRY

1. Revise the syllabus covered in the class
2. Prepare a project on any of the research based topic discussed with the teacher.
3. Chemistry behind desalination in Andaman & Nicobar Island.
 - (a) Principles of reverse osmosis
 - (b) Relevance for Island communities
 (Project format : Charts or Maps or Photographs etc)

BIOLOGY

1. Revise the syllabus covered in the class.

2. Project "Island Odyssey"

Imagine you're a marine biologist or a travel writer exploring the Andaman and Nicobar Islands. Create a project that showcases your understanding of the islands' unique ecosystem, culture, and history.

Choose One:

(a) Marine Life Mural: Design a colorful mural depicting the diverse marine life found in the Andaman and Nicobar Islands.

(b) Travel Journal: Write a travel journal entry about a virtual trip to the islands, highlighting the culture, history, and natural beauty.

(c) Eco-Tourism Brochure: Create a brochure promoting eco-tourism in the Andaman and Nicobar Islands, focusing on sustainable practices and conservation.

(d) Short Story: Write a short story set in the Andaman and Nicobar Islands, incorporating local legends, myths, or historical events.

Requirements:

(a) Be creative and original.

(b) Include relevant facts and information about the islands.

(c) Use visually appealing designs, illustrations, or images.

(d) Submit a neatly written or typed document.

2. Create a chart to depict biodiversity in Andman and Nicobar Islands.

3. Prepare a project on the any research based topic. Students have to make an Investigatory Project on the topic discussed with the teacher.

Investigatory Project Details for Chemistry & Biology

How to write the report of the investigatory project?

A sample format on how to properly write the project report is given as follows:

Front Page / Cover Page

In this page you will have to write the Title of the project or name of the project that you are working on. It also should contain other information such as the name of the student;

Certificate

This page will contain a certificate that will certify your project. It will have information like your project title, your name, roll number, guide teacher's name, along with space for signature of the guide teacher and external practical examiner.

Acknowledgement

The page acknowledges individuals that have played a direct or indirect role in completing your project work. Table of Contents This page contains all the major headings and sub headings of your project. It should contain the respective page numbers also.

Objective / Aim of the project

This page expresses the aim of the project as clearly as possible.

Introduction / Theory

This should give a general idea of the project that you have worked on and should introduce the reader to your project'

Materials required

In this page all the materials or apparatus used are mentioned.

Procedure

In a simple manner, write the steps that you have followed during your experiment/ investigation. You may include a diagram or photo of the experimental setup.

Observation / Result

Once the experiment is performed you should record your observations.

You can represent your observations in the form of a table or chart or text or pictures or a combination of these.

Analysis and interpretation

Based on the observations, analyse your data. Precaution Mention all the precautions that should be followed during the experiment.

Conclusion:

Based on the results obtained and related work done, write the conclusion briefly. You may also write whether the objectives of your project have been met or not.

Bibliography/ References

This should be the last page of your project write up.

Here you should mention all the resources that you have used in terms of articles/books or URLs while working on the project.

MATHS

1. Practice and revise all chapters taught in class till date and Learn all the formulas that are there in certain chapters.
2. The theme of the question is **ANDAMAN AND NICOBAR/ SIKKIM/ LAKSHADWEEP**. A matrix representing the number of tourists (in hundreds) visiting 3 islands over 3 months:

$$\begin{bmatrix} 45 & 50 & 42 \\ 30 & 35 & 32 \\ 29 & 25 & 28 \end{bmatrix}$$

(Rows = Havelock, Neil Island, port Blair; Columns = Months: Jan–MAR)

- (a) Find the total number of tourists for each island using row operations.
- (b) Which island received the highest number of tourists.

3. NEP 2020 Interdisciplinary Task (Geography + Maths)

A drone survey over agricultural plots in 3 villages produces a matrix of land use.

Let each row represent a village and each column represent the land usage (farming, grazing, forest area in sq. km). The data is:

$$M = \begin{bmatrix} 10 & 12 & 13 \\ 14 & 15 & 16 \\ 17 & 15 & 12 \end{bmatrix}$$

Find the determinant of MMM and interpret what it means in terms of land management decisions.

ACCOUNTANCY

1. Revise the syllabus covered in the class.
2. Prepare a specific project of any company including its
 - (a) Segment reporting
 - (b) Cash flow Statement

BUSINESS STUDIES

1. Revise the syllabus covered in the class.
2. Prepare the project from the following topic according to Roll Numbers:
 - (a) Business environment – Roll No. 4, 5, 9, 14, 18, 20
 - (b) Principles of management – Roll No. 2, 3, 7, 8, 12, 15
 - (c) Marketing management – Roll No. 10, 13, 11, 1, 17
 - (d) Stock exchange – Roll No. 6, 16, 19

ECONOMICS

1. Revise the syllabus covered in the class.
2. Prepare the project from the following topic already allotted to you in the class.
 - Micro and Small Scale Industries
 - Food Supply Channel in India
 - Contemporary Employment situation in India
 - Disinvestment policy of the government
 - Goods and Services Tax Act and its Impact on GDP
 - Health Expenditure (of any state)
 - Human Development Index
 - Inclusive Growth Strategy
 - Self-help group
 - Trends in Credit availability in India
 - Monetary Policy Committee and its functions
 - Role of RBI in Control of Credit
 - Government Budget & its Components
 - Trends in budgetary condition of India
 - Exchange Rate determination – Methods and Techniques
 - Currency War – reasons and repercussions
 - Livestock – Backbone of Rural India
 - Alternate fuel – types and importance
 - Sarva Shiksha Abhiyan – Cost Ratio Benefits
 - Golden Quadrilateral- Cost ratio benefit
 - Minimum Support Prices
 - Relation between Stock Price Index and Economic Health of a Nation
 - Waste Management in India – Need of the hour
 - Minimum Wage Rate – Approach and Application
 - Digital India- Step towards the future
 - Rain Water Harvesting – A solution to water crisis
 - Vertical Farming – An alternate way
 - Silk Route- Revival of the past
 - Make in India – The way ahead
 - Bumper Production- Boon or Bane for the farmer
 - Rise of Concrete Jungle- Trend Analysis
 - Organic Farming – Back to the Nature
 - Aatmanirbhar Bharat
 - e-Rupee (e- ₹)
 - Sri Lanka's Economic Crisis
 - Sustainable Development Goals (SDG's)
 - Environmental Crisis
 - Comparative Study of Economies (Maximum three economies)
 - New Education Policy (NEP) 2020: A Promise for a New Education System
 - G-20: Inclusive and Action Oriented
 - Amrit Kaal: Empowered and Inclusive Economy
 - Cashless Economy
 - Any other newspaper article and its evaluation on basis of economic principles

POLITICAL SCIENCE

Task 1:

"How does the strategic importance of Lakshadweep reflect India's foreign policy priorities in the Indian Ocean Region, and what constitutional provisions empower the Union Government to manage such Union Territories effectively?"

Hint for students:

Consider Lakshadweep's location near international shipping lanes
Think about India's relations with countries like Maldives and China
Explore Article 239 and Union Territories governance
Do it on A4 size sheet

TOPIC-WISE ROLL NUMBER ALLOCATION:

Topic 1: BRICS & ASEAN – India's Strategic Role

India's involvement in BRICS and ASEAN, economic partnerships, de-dollarisation, regional influence.

Roll Numbers: 1, 2, 3

Topic 2: Partition of India & Challenges of Nation Building

Two-Nation Theory, communal violence, resettlement, linguistic reorganization, democratic consolidation.

Roll Numbers: 4, 5, 6

Topic 3: NITI Aayog vs Planning Commission + Globalisation

Comparison of approaches, development strategies, and impact of globalisation on India's economy and politics.

Roll Numbers: 7, 8, 9

Topic 4: India's Nuclear Policy

Doctrine of No First Use, strategic deterrence, global implications, and treaties.

Roll Numbers: 10, 11, 12

Topic 5: India & United Nations + International Organisations

India's candidature for UNSC, role in UN peacekeeping, contributions to WHO, UNESCO, UNICEF, and India's global image.

Roll Numbers: 13, 14, 15

Topic 6: Indian Foreign Policy – Continuity and Change

Non-alignment, shift toward strategic autonomy, neighbourhood-first policy, and global diplomacy post-2014.

Roll Numbers: 16, 17

PROJECT FILE MUST INCLUDE:

1. **Cover Page** (Name, Roll No., Topic, Class)
2. **Acknowledgement**
3. **Index**
4. **Introduction**
5. **Content with Headings & Subheadings**
6. **Current Affairs & Newspaper Clippings** (where relevant)

7. **Visuals** (Maps, Charts, Pictures)
8. **Personal Reflection / Analysis**
9. **Bibliography** (Books, Journals, Online Sources)

SUBMISSION:

Date: First day after summer vacations

Format: Spiral-bound file

COMPUTER SC. & INFORMATICS PRAC.

Q1. Do the following Python programs practically and make a single pdf file. The format of the file is as follows:

- Program heading (Question)
- Code of the program question
- Screenshot of the output

Questions:

1. WAP to compute x^n of given two integers x and n .
2. WAP for calculating simple interest.
3. WAP to accept a number from the user and display whether it is an even number or odd number.
4. WAP to accept percentage of a student and display its grade accordingly.
5. WAP to print Fibonacci series up to certain limit.
6. WAP to display prime numbers up to a certain limit.
7. WAP to accept a number, find and display whether it's a Armstrong number or not.
8. WAP to accept a number and find out whether it is a perfect number or not.
9. WAP to print the sum of the series $1+x^1/1!+x^2/2!+.....x^n/(n)!$ - exponential series.
10. WAP to print the following pattern: 1
1 2
1 2 3
11. WAP to accept a string and display whether it is a palindrome.
12. WAP that counts the number of alphabets and digits, uppercase letters, lowercase letter, spaces and other characters in the string entered.
13. WAP to accept a string (a sentence) and returns a string having first letter of each word in capital letter.
14. WAP to remove all odd numbers from the given list.
15. WAP to display second largest element of a given list.
16. WAP to display cumulative elements of a given list.
17. WAP to display frequencies of all the elements of a list.
18. WAP in Python to display those strings which are string with 'A' of given list.
19. WAP in Python to find and display the sum of all the values which are ending with 3 from a list.
20. WAP to shift the negative number to left and the positive numbers to right.
21. WAP to swap the content with next value divisible by 7.
22. WAP to accept values from user and create a tuple.
23. Write a program to input total number of sections and stream name in 11th class and display all information on the output screen.

24. Write a Python program to input names of 'n' countries and their capital and currency, store it in a dictionary and display in tabular form. Also search and display for a particular country.

Informatics Practices

Q1. Do the following Python programs practically and make a single pdf file.

- The format of the file is as follows:
- Program heading (Question)
- Code of the program question
- Screenshot of the output

Questions

1. Create a pandas series from a dictionary of values and an array.
2. Given a Series, print all the elements that are above the 75th percentile.
3. Create a data frame for examination result and display row labels, column labels data types of each column and the dimensions
4. Filter out rows based on different criteria such as duplicate rows.
5. Locate the 3 largest values in a data frame.
6. Subtract the mean of a row from each element of the row in a Data Frame.
7. Replace all negative values in a data frame with a 0.
8. Importing and exporting data between pandas and CSV file.
9. Importing and exporting data between pandas and MySQL database.
10. Given the school result data, analyse the performance of the students on different parameters, e.g subject wise or class wise.
11. For the Data frames created above, analyze and plot appropriate charts with title and legend.
12. Program to plot frequency of marks using Line chart.
13. Program to draw two lines along with proper titles and legends.

HINDI

प्रत्येक छात्र/छात्रा अपने अनुक्रमांक के अनुसार दिए गए विषयों से संबंधित एक परियोजना कार्य तैयार करेंगे जिसमें 1000 से 1200 शब्द होंगे। परियोजना कार्य बहुत ही स्वच्छ और त्रुटि रहित होना चाहिए।

अनुक्रमांक-1,6,11,16

प्रश्न- 1 हिंदी कविता का विकास

अनुक्रमांक-2,7,12,17

प्रश्न- 2 हिंदी भाषा और उसकी बोलियां

अनुक्रमांक-3,8,13

प्रश्न- 3 राम भक्त तुलसीदास

अनुक्रमांक-4,9,14

प्रश्न- 4 पद्मावत - एक महाकाव्य

अनुक्रमांक-5,10,15

प्रश्न- 5 हिंदी साहित्य की विधाएं

PHYSICAL EDUCATION

- Q1. Make the project files as per the topics discussed in the class.
- Q2. Revise the entire syllabus covered so far in the class.