St. XAVIER'S HIGH SCHOOL
EDUCATION FOR ALL
BANKURA, WB
Affiliation No.: 2430130
Affiliated to CBSE (New Delhi) 10+2 level
School Code: 15720

SUMMER VACATION ASSIGNMENT (2025-2026)

Class-XII-Science

Subject: English

A. Prepare a Project of the same topic according to the assigned Roll no. (Part of your ASL board exam)

Information regarding the project:

1. The project should be in handwritten form in practical sheets. No Printed Project is accepted.

2. Project must contain pictures (Mandatory).

3. The project must contain the following points:
a) Cover Page (School name, school logo, name of topic, students name, class, subject, session, roll number, guided by in
printed form only.
b) Certificate
c) Index
d) Introduction to the topic.
e) Main content (Meaning, Definition if any, Writer's life, Importance of the text, Work's Influence on us, role in our life, etc.)
f) Conclusion.
g) Bibliography/References

4. Submit the project report in a lace file with appropriate cover.

TOPIC. ASSIGNED	**ROLL NO.**
1.The lens of Eco-Feminism through the poems of Adrienne Rich, like "Trees" and "Aunt Jennifer's Tigers":-	**Roll 01 to 15.**
2.The plight of old age and acceptance of death through poem- *My Mother at Sixty-Six* by Kamala Das.	**:- Roll 16 to 30.**
3. Atrocities faced by the innocents in *Lost Spring* by Anees Jung with focus on socio-economis conditions that lead to child labour and the impact of it on their lives.	**:-31 to 45.**
4.On overcoming our fear with reference to *Deep Water* by W. Douglas and a diary entry (your own experience from life) .	**:- 46 to 60.**

5.The theme of language, identity and patriotism in *The Last Lesson* by A. Daudet. :- 61 to rest.

Subject: Physics

PROJECT

A. To prepare Investigatory project for AISSCE, 2025-26 for Physics (042).

Following points should be followed properly:

1. The project should be in A4 white sheet in Handwritten form. No printed projects are accepted.

2. The project must contain:

a) Cover page (Printed) with school name, school logo, Topic name, any cover picture related to provided topics, submitted by(Student name), Class, Board roll no.(Leave as blank space), session, subject, Guided by (Subject Teacher name).

b) Certificate (Printed, Format will be provided)

c) Acknowledgement (Printed, Format will be Provided)

d) Index (Handwritten)

e) Content (Handwritten)

f) Conclusion (Handwritten)

g) Bibliography (Handwritten)

3. The content must contain Introduction, Topic description, Advantages, Disadvantage, application etc.

4. Project must contain Picture representation and statistical representation (if any).

5. Topics for the investigatory project will be provided shortly in the class group.

6. Compile all pages in a channel file.

PRACTICALS

INSTRUCTIONS:

1. ***There will be two practical notebook- one for ACTIVITY, another for EXPERIMENTS. Students have to write total 6 activities and 8 experiments.***
2. ***Activities should be written in activity notebook and Experiments should be written in experiment notebook.***
3. ***PDF of experiments and activities will be provided in class group shortly.***
4. ***Observation table should leave vacant. Values should be written after doing the practical.***

A.Write the following activities Activity notebook:

Activity No.1- To assemble a household circuit comprising three bulbs, three (on/off) switches, a fuse and a power source.

Activity no.2- To assemble the components of a given electrical circuit.

Activity No.3- To study the variation in potential drop with length of a wire for a steady current.

B. Write the following experiments in experiment notebook:

Experiment No.1- To determine resistivity of two wires by plotting a graph for potential difference versus current.

Experiment No. 2- To find resistance of a given wire/standard resistor using metre bridge.

Experiment No. 3- To verify the laws of combination (series) of resistances using a metre bridge.

Subject: Mathematics

ACTIVITY :

INSTRUCTIONS ABOUT HOW TO WRITE THE ACTIVITIES WILL BE DISCUSSED IN CLASS.

ROLL NUMBER 1-50:

1. Verify that the relation R in the set L of all lines in a plane, defined by R = {(l, m) : l ⊥ m} is symmetric but neither reflexive nor transitive.

2. Demonstrate a function which is not one-one but is onto.

3. Draw the graph of sin^(-1) x , using the graph of sin x and demonstrate the concept of mirror reflection (about the line y = x).

4. Find analytically the limit of a function f (x) at x = c and also to check the continuity of the function at that point.

5. Verify Rolle's Theorem.

6. Understand the concepts of decreasing and increasing functions.

7. Construct an open box of maximum volume from a given rectangular sheet by cutting equal squares from each corner.

8. Verify that angle in a semi-circle is a right angle, using vector method.

9. Demonstrate the equation of a plane in normal form.

10. Measure the shortest distance between two skew lines and verify it analytically.

ROLL NUMBER 51-REST:

1. Verify that the relation R in the set L of all lines in a plane, defined by R = {(l, m) : l || m} is an equivalence relation.

2. Demonstrate a function which is one-one but not onto.

3. Explore the principal value of the function sin^(–1)x using a unit circle.

4. Verify that for a function f to be continuous at given point x_0 , Δy= |f (x_0+Δx) – f(x_0)| is arbitrarily small provided. Δx is sufficiently small.

5. Verify Lagrange's Mean Value Theorem.

6. Understand the concepts of local maxima, local minima and point of inflection.

7. Find the time when the area of a rectangle of given dimensions become maximum, if the length is decreasing and the breadth is increasing at given rates.

8. Locate the points to given coordinates in space, measure the distance between two points in space and then to

verify the distance using distance formula.
9. Verify that the angle between two planes is the same as the angle between their normals.
10. Explain the computation of conditional probability of a given event A, when event B has already occurred, through an example of throwing a pair of dice.

Subject: Chemistry

To prepare Investigatory project for SSCE, 2025-26 for CHEMISTRY (043)
Following points should be followed properly:
1. The project should be in A4 white sheet in Handwritten form. No printed projects are accepted.
2. The project must contain:
a) Cover page (Printed) with school name, school logo, Topic name, any cover picture related to provided topics, submitted by(Student name), Class, Board roll no.(Leave as blank space), session, subject (CHEMISTRY (043), Guided by (Subject Teacher name).
b) Certificate (Printed, Format will be provided)
c) Acknowledgement (Printed, Format will be Provided)
d) Index (Handwritten)
e) Content (Handwritten)
f) Conclusion (Handwritten)
g) Bibliography (Handwritten)
3. The content must contain Introduction, Topic description, Advantages, Disadvantage, application etc.
4. Project must contain Picture representation and statistical representation (if any).
5. Compile all pages in a channel file.

The Investigatory project topics are given below. You have to do any one of them. Who will do which is given according to the roll number?

1. Study of the presence of oxalate ions in guava fruit at different stages of ripening (ROLL NO - 1-16)
2. Study of quantity of casein present in different samples of milk. (ROLL NO - 17-32)
3. Study of common food adulterants in fat, oil, butter, sugar, turmeric power, chilli powder and pepper. (ROLL NO - 33-48)
4. Extraction of essential oils present in Saunf (aniseed), Ajwain (carom), Illaichi (cardamom). (ROLL NO - 49-64)
5. Preparation of soybean milk and its comparison with the natural milk with respect to curd formation, effect of temperature, etc. (ROLL NO - 65-79)

Subject: Biology

To prepare investigatory project for AISSCE, 2025-26 for Biology (044).

Following points should be followed properly:

1. The project should be in A4 white sheet in Handwritten format. No printed projects are accepted and applicable.

2. The project must contain:

a) Cover page (Printed) with school name, school logo, topic name, and cover picture related to provided topics, submitted by (Student name), Class, Board roll no. (Leave as blank space), session, subject (Biology 044), Guided by (Subject Teacher name).

b) Certificate (Printed, Format will be provided)

c) Acknowledgement (Printed, Format will be Provided)

d) Index (Handwritten)

e) Content (Handwritten)

f) Conclusion (Handwritten)

g) Bibliography (Handwritten)

3. The content must contain Introduction, History, Topic description, Advantages, Disadvantage etc.

4. Project must contain Picture representation and statistical representation (if any).

5. Topics for the investigatory project will be provided shortly in the class group.

6. Compile all pages in a channel file.

B. Write these three experiments in practical notebook with well labelled diagram from the provided PDF in class group:

NOTE: Diagram and their labelling should be made with pencil only.

Experiment No. 1- To Prepare a temporary mount to observe pollen germination.

Experiment No.2- To study the plant population density by quadrat method.

Experiment No. 3- To study the plant population frequency by quadrat method.

Subject: Computer Science

****** ALL THE PROGRAM MUST BE WRITTEN IN PYTHON PROGRAMMING LANGUAGE AND MYSQL (ACCORDING TO THE QUESTIONS)***
****** USE PRACTICAL FILE FOR WRITTEN (HAND WRITTEN) THE CODE***
****** ONLY HANDWRITTEN WILL BE ACCEPTABLE.***

Program 1: Input any number from user and calculate factorial of a number

Program 2: Input any number from user and check it is Prime no. or not

Program 3: Write a program to find sum of elements of List

Program 4: Write a program to calculate the n_{th} term of Fibonacci series
Program 5: Program to search any word in given string/sentence
Program 6:Write a Program to check if the entered number is Armstrong or not.
Program 7: Write a Program to enter the string and to check if it's palindrome or not using loop.
Program 8: Program to read and display file content line by line with each word separated by "#"
Program 9: Program to read the content of file and display the total number of consonants, uppercase, vowels and lower case characters"
Program 10: Program to create binary file to store Rollno and Name, Search any Rollno and display name if Rollno found otherwise "Rollno not found"
Program 11: Program to create binary file to store Rollno,Name and Marks and update marks of entered Rollno
Program 12: Program to read the content of a file line by line and write it to another file except for the lines contains „a" letter in it.
Program 13: Program to create CSV file and store empno,name,salary and search any empno and display name,salary and if not found appropriate message.
Program 14: Program to generate random number 1-6, simulating a dice.
Program 15: Program to implement Stack in Python using List.
Program 16: Program to connect with database and store record of employee and display records.
Program 17: Program to connect with database and search employee number in table employee and display record, if empno not found display appropriate message.
Program 18: Program to connect with database and update the employee record of entered empno.
Program 19: Program to connect with database and delete the record of entered employee number.
Program 20: Write queries for the following questions based on the given two tables.

TABLE: STOCK

Pno	Pname	Dcode	Qty	UnitPrice	StockDate
5005	Ball point pen	102	100	10	2021-03-31
5003	Gel pen premium	102	150	15	2021-01-01
5002	Pencil	101	125	4	2021-02-18
5006	Scale	101	200	6	2020-01-01
5001	Eraser	102	210	3	2020-03-19
5004	Sharpner	102	60	5	2020-12-09
5009	Gel pen classic	103	160	8	2022-01-19

TABLE: DEALERS

Dcode	Dname
101	Sakthi Stationeries
103	Classic Stationeries
102	Indian Book House

a) To display the total Unit price of all the products whose Dcode as 102.
b) To display details of all products in the stock table in descending order of Stock date.
c) To display maximum unit price of products for each dealer individually as per Dcode from the table Stock.
d) To display the Pname and Dname from table stock and dealers.
e) To display the details of all Pname whose dealers name is 'Sakthi Stationeries'

Subject: Dance (Kathak)

1. Mention the three gharanas of Kathak dance and analyze them.
2. Write theka of Dadratal, Kaherwatal, Rupaktal, Teental and Jhaptala.
3. Pandit Birju Maharaj, Kumudini Lakhia, Shambhu Maharaj, and Gopi Krishna write about their life stories.

Subject: PHYSICAL EDUCATION

1. What is physical education?
2. Draw the diagrams of a volleyball court and a kabaddi court, including accurate labels for all dimensions and key areas.

ALL THE ASSIGNMENT SHOULD BE DONE IN THE RESPECTIVE SUBJECT COPIES.