



KIIT World School

I am a Promise, I am a Possibility



SUMMER HOLIDAYS' HOMEWORK

Hope your summer is filled with **reading, writing,**
and most of all...**fun!**

Class XII





KIIT World School

I am a Promise, I am a Possibility

*Never
STOP
Learning!*

Dear Parents,

In summer's golden embrace, behold the holidays' allure,
When sun-kissed days dance freely, hearts find joy secure.
From bustling cities to serene shores, a world ablaze with glee,
Summer holidays arrive, unlocking souls and setting spirits free.

Summer vacations are a great time for the children to take a break from school and explore new interests and activities. So, let's pursue some interests and engage them in meaningful activities that can help them grow and develop.

- Summer vacations offer an excellent opportunity to pursue hobbies and master vital life skills like cooking, cleaning, and gardening, which not only aid in personal growth but also instil self-confidence and a lifelong love of learning.
- Help your child to be an early bird. Waking up early has two benefits. First you can stay productive and secondly you can do more activities that are stimulating and fun.
- Teach your child not to waste food. Acquaint with the hard work put in by the mothers and farmers.
- Expand your child's horizons and make him/her learn a new language while enjoying the holidays.
- Give wings to your child's imagination by the joy of reading, by visiting local libraries or bookstores, engaging math lessons with cooking, grocery shopping, and discovering the fascinating world of numbers.
- As a society, we are more connected and yet also less connected than ever before. So, in order to abridge this gap, share the values and culture of the extended family system by sharing interesting talks and anecdotes related to the same.
- Spend time outdoors with your child as it is the perfect time to engage in outdoor activities.
- Make travel plans with children to unveil captivating cultures, rich history, and breath-taking landscapes, as museums, historical sites, and national parks become their gateway to knowledge and adventure.
- Embrace the summer break with joyous bonding through board games, movie nights, culinary adventures, and making your children lend a hand in the household, forging cherished connections that last a lifetime.
- Carve out family time at the end of the day. Share stories with your children and impart some valuable life lessons and morals.

Last but not least, laugh together and strengthen your bond.

The last day for submission of holidays' homework is June 27, 2023, from 8:00am to 1:00pm



**Kindly note: You are requested to submit your Holidays homework on 27 June,2023
between 8:00 am -1:00 pm to your respective CTs in school.**

Class XII

Holidays Homework 2023 - 24

Plagiarism is strictly prohibited

SCIENCE STREAM

ENGLISH

As mandated by CBSE, the students have to prepare the following activities and a project for the internal assessment.

1. Art Integration Activities

Theme - National Integration

You have to prepare and submit two activities where you integrate art with your subject (any topic/chapter/concept). Under the 'Ek Bharat Shreshtha Bharat' initiative of CBSE, Delhi has been paired with Lakshadweep and Andaman & Nicobar Islands. You should integrate your topic with the partner union territories.

You can choose any two of the following activities and prepare your presentations:-

1. Posters
2. Brochures
3. Scrapbooks
4. Collages
5. Storyboards
6. Caricatures
7. Doodle art
8. Painting/ Drawing

2. Project Work

WORD LIMIT - 800 to 1000 words

Theme – War and Peace

Topics Covered: -

1. The Last Lesson
2. Lost Spring
3. Deep Water
4. Keeping Quiet
5. Indigo
6. The Enemy
7. The Third Level

Date of Submission: June 30, 2023

INSTRUCTIONS

1. The project report must include the following:
 - a) Cover Page
 - b) Dedication
 - c) Acknowledgement

- d) Certificate
- e) Index
- f) Aim/Objective
- g) Material/Resources required
- h) Hypothesis
- i) Methodology/Procedure
- j) Observations
- k) Inferences
- l) Conclusion
- m) Application
- n) Future Scope
- o) Log table
- p) References/ Bibliography

2. Any type of A4 size sheets can be used to prepare the project.

3. Relevant pictures, graphical representation and questionnaires must be a part of the project.

4. The Project must have a log table recording your weekly progress.

5. The project must be hand-written in a beautiful and cursive handwriting. You must take care of the aesthetics and presentation of the project keeping in mind the margins and proper spacing/indentation.

6. The project can be spiral-bound or filed neatly in a folder.

Link to Sample Projects

https://drive.google.com/file/d/1c2nTqh9dkWD4ZXocaBIHA_gZ4v9mjpCO3/view?usp=sharing

https://drive.google.com/file/d/1-tnk0EfX8psHeFcbyEtGnYRZ_gFSJLoi/view?usp=sharing

https://drive.google.com/file/d/1iJ7L4IigAa_Quk4lX5HrRFDFIYdnU-XG/view?usp=sharing

CHEMISTRY

TASK 1: Investigatory Project

Prepare an investigatory project of chemistry which should be experiment based. It should be a research based project where every aspect of the topic selected should be discussed in terms of chemistry. The project should have the following key aspects:

- Certificate
- Acknowledgement
- Why was this selected? (Relation to daily life)
- Introduction
- Details of the project (Research related to the topic)
- Experiment (Detailed manner including procedure)
- Observations
- Analysis
- Result
- Bibliography (Mention the links)

Project should be aesthetically prepared. No print out of content is allowed, only data or pictures can be printed. **IT HAS TO BE FIRST APPROVED.** (REFER TO GUIDELINES IN CBSE CURRICULUM)

TASK 2: ART INTEGRATION: Chemo-Scavenger Hunt

Explore 5 organic compounds from any of the material around you like medicine, food ingredients, preservatives, perfume components etc. After selecting five compounds, create a game based on Chemical hunt providing hints to lead and reach to the chemical compound. Use hidden hints, names, flip marks to show the hidden compound. Be creative to represent it. Use an A3 sheet to create this game.

TASK 3: ORGANIC CORE PRACTICE

I. Practice for the following topics in chemistry notebook:

- Nomenclature (30 organic compounds)
- Mechanisms learnt so far in organic.
- Minimum 15 pairs of compounds for distinguishing between covering all the chemical tests (Hinsberg, Lucas, Carbylamine, Iodoform, 2,4-DNP , Neutral FeCl₃ test, bromine water test, Tollens' Test, Fehling Test etc- those done so far)
- Complete the reactions (minimum 20)
- Word problems (minimum 10)

II. Attempt both sets of PT1 in notebook. All assignments MUST BE COMPLETED till the concepts covered so far.

III. Attempt all the given CBSE board questions in your notebook. Board target Questions will be uploaded on the class wall.

Link for Board Target questions:
https://drive.google.com/file/d/1A8hEoyvymeZ7wXOzFwRGiDddc0njdIdh/view?usp=share_link

PHYSICS

1. PERFORM THE FOLLOWING SIMULATIONS AND RECORD THE OBSERVATIONS(TO BE DONE IN PHYSICS NOTEBOOK AND ALSO PASTE IMAGES):

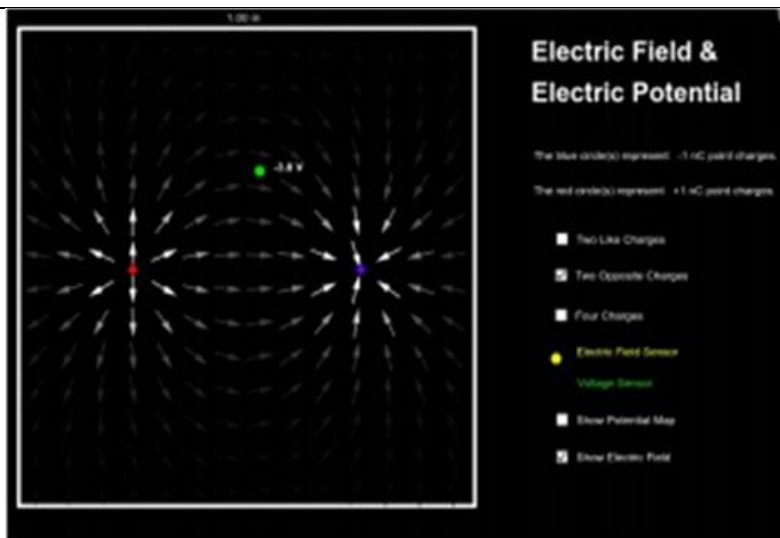
● Learning objectives: students will be able to understand

- The electric potential is the electrostatic potential energy per unit charge.
- The connection between the electrostatic potential, the electrostatic potential energy and the force on charged particles.

● Before this simulation read about:

- Electric potential energy
- Electric potential difference
- Electrostatic potential
- Equipotential surface

Open the simulation: <https://ophysics.com/em4.html>



- **Select Two Opposite Charges.**

A) Click on the green dot (Voltage Sensor) and drag it over the picture. Place it directly to the left of the blue charge and move horizontally across until you hit the red charge.

1. How does the voltage change?
2. Is there a location where the voltage is zero?

- **Select Two Like Charge**

3. What happens to the voltage as you move towards either charge?
4. What happens to the voltage as you move away from both charges?
5. Is there a location in the box where the voltage is zero?

Open the simulation below and select the grid option: •

(https://phet.colorado.edu/sims/html/charges-and-fields/latest/charges-and-fields_en.html)

- You see a blank grid on which you can create charge distributions by drag and drop the positive and negative charges located at the bottom. Place a positive charge in the region. Use the potential difference measuring device (the purple tool). If you place this device on the canvas, it reads the potential at that location. If you click the pencil, it will draw an equipotential line. Start at a potential of 20 V and draw an equipotential line. Now move until you hit 15 and draw another equipotential line, continue to decrease in steps of 5V and draw equipotential lines until you hit 5 volt.

1. **What is the shape of the equipotential lines?**

- Now reset (orange reset button) and instead place a negative charge. Do the same thing only this time start at -20V and continue to increase in steps of 5V until you hit -5V, drawing an equipotential line every 5V.

2. **What is the shape of the equipotential lines?**

- Now reset and place both a positive charge and negative charge into the region. Separate the charges by a distance of 100cm. Repeat the above exercise of drawing equipotential lines starting at 30 V and decreasing in steps of 5V until you reach -30V.

3. **In general are the equipotential lines for this charge distribution circles?**

4. **If you go close to the positive or negative charge and draw an equipotential line what shape is it?**

5. **What is the name of this type of charge distribution?**

Capacitor Basics

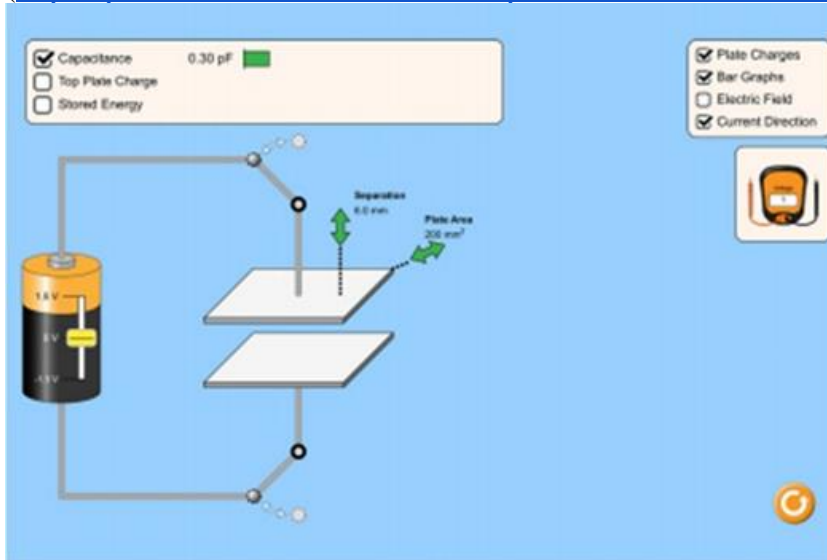
Read about:

- Behavior of conductor's electrostatic field
- Electrostatic shielding
- Electrical Capacitance
- Parallel plate capacitor

For a parallel plate capacitor, the capacitance can be written as, $C = \epsilon_0 A / d$ where A is the area of the plates and d separation between the two plates.

- Open the following simulation and select capacitance.

(https://phet.colorado.edu/sims/html/capacitor-lab-basics/latest/capacitor-lab-basics_en.html)



- Use the slider on the battery to set the potential difference and click the boxes to show top plate charge and stored energy. Start with 0 V
1. What is the capacitance? (pF) p-pico 10-12
 2. What is the charge on the top plate?
 3. What is the stored energy?
 4. First decrease, then increase the area of the plates. How does the capacitance change?
 5. First decrease, then increase the separation of the plates. How does the capacitance change?
- As you increase the voltage of the battery to 1.5 V are the following statements true?
6. As the voltage increases the capacitance grows in magnitude.
 7. As the voltage increases the stored charge decreases in magnitude.
 8. As the voltage increases the stored energy remains constant. Keep the voltage at 1.5 V. If you first decrease, then increase the area of the plates:
 - (a) How does the capacitance change?
 - (b) How does the charge change?
 - (c) How does the energy stored change?

2.PROJECT WORK

Prepare a project of physics which should be research or experiment based (**Working project**), where every aspect of the topic selected should be discussed. The project should have the following key aspects:

- Certificate
- Acknowledgement
- Why was this selected? (Related to daily life)
- Introduction
- Details of the project
- Experiment
- Observations

· Analysis

· Result

· Bibliography (mention the links)

Project should be aesthetically prepared. Print out of the content is not allowed, only data or pictures can be printed and the same has to be approved first. Project should be on A-4 size plain sheets and the limit of the project is 15-20 pages.

3. CONCEPT PRACTICE

a) Attempt both sets of PA1 in the notebook. All assignments MUST BE COMPLETED till the concepts covered so far.

b) Attempt both sets of PT1 in the notebook. All assignments MUST BE COMPLETED till the concepts covered so far.

c) Practice for the following topics in physics notebook

- Numericals on Gauss law and electric potential (15 numericals)
- Concept of capacitors with dielectric.
- Concept of current electricity- Resistance, resistivity, conductivity, Potential difference, EMF, Krichoff's law and Meter bridge.(Definitions, formulas and difference in notebook)

d). Attempt all the given worksheet and question bank in your physics notebook.

https://drive.google.com/drive/folders/1v80gvR1EjaYpasvHbliuv196X-PZXL8i?usp=share_link

MATHEMATICS

TASK 1

For Even roll no.

Project 1 : To explore the principal value of the function $\sin^{-1}x$ using a unit circle.

Procedure:

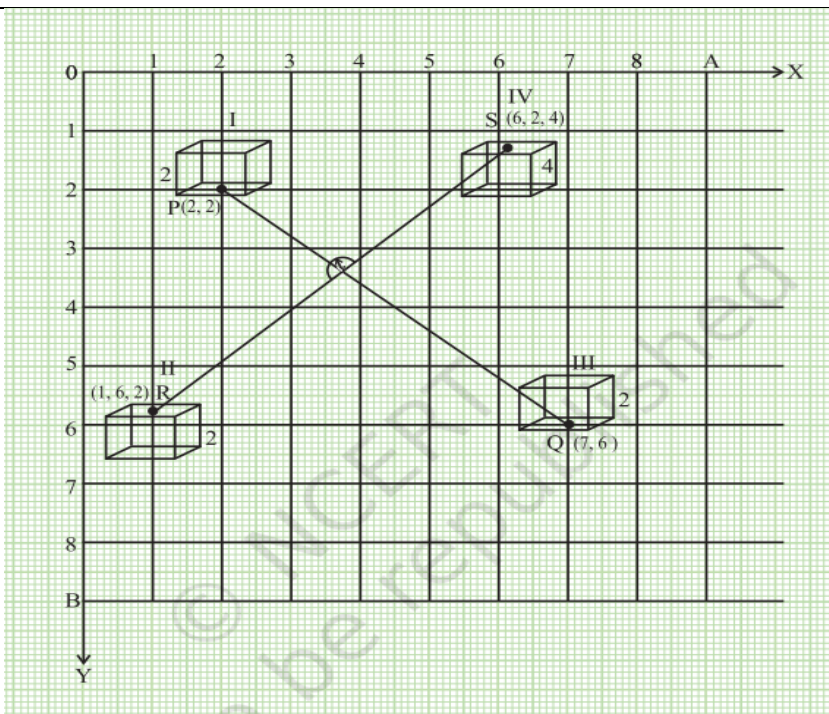
1. Take a cardboard of a convenient size and paste a white chart paper on it.
2. Draw a unit circle with centre O on it.
3. Through the centre of the circle, draw two perpendicular lines X'OX and YOY' representing x-axis and y-axis, respectively as shown in Fig. 6.1.
4. Mark the points A, C, B and D, where the circle cuts the x-axis and y-axis, respectively as shown in Fig. 6.1.
5. Fix two rails on opposite sides of the cardboard which are parallel to y-axis. Fix one steel wire between the rails such that the wire can be moved parallel to x-axis as shown in Fig. 6.2.
6. Take a needle of unit length. Fix one end of it at the centre of the circle and the other end to move freely along the circle.

For odd roll no.

Project 2: To measure the shortest distance between two skew lines and verify it analytically

Procedure:

1. Paste a squared paper on a piece of plywood.
2. On the squared paper, draw two lines OA and OB to represent x-axis, and y-axis, respectively.
3. Name the three blocks of size $2\text{ cm} \times 2\text{ cm} \times 2\text{ cm}$ as I, II and III. Name the other wooden block of size $2\text{ cm} \times 2\text{ cm} \times 4\text{ cm}$ as IV.
4. Place blocks I, II, III such that their base centres are at the points (2, 2), (1, 6) and (7, 6), respectively, and block IV with its base centre at (6, 2). Other wooden block of size $2\text{ cm} \times 2\text{ cm} \times 4\text{ cm}$ as IV



5. Place a wire joining the points P and Q, the centers of the bases of the blocks I and III and another wire joining the centers R and S of the tops of blocks II and IV as shown in Fig. 26.
6. These two wires represent two skew lines.
7. Take a wire and join it perpendicularly with the skew lines and measure the actual distance.

TASK 2

Lab manual activity: 1. To demonstrate a function which is not one-one but is onto.

2. To demonstrate a function which is one-one but not onto.

3. To draw the graph of $1 \sin x -$, using the graph of $\sin x$ and demonstrate the concept of mirror reflection (about the line $y = x$).

TASK 3

Group Activity:

- Relate your topic to Delhi and Andaman and Nikobar (ex. Package, map, whether, flight tickets)
- Minimum 10 to 15 slides, must include cover page, subject, Index, history, formulae, case study, real life applications, Bibliography

PPT: QC1 (Probability)

QC2 (3 dimensional geometry)

QC 3(Continuity and differentiability)

QC 4(Applications of Derivatives)

QC 5(Applications of integral)

QC6 (linear programming)

Note: Revise Ch. 2,3,4, 5 and 6 PA-2 examination

Utilise your best time to accomplish your task on time at the same time enjoy also.

COMPUTER SCIENCE

PROJECT WORK

The aim of the class project is to create something that is tangible and useful using Python / Python and SQL connectivity. This should be done by one student or in groups of two to three students.

The aim here is to find a real-world problem that is worth solving. Students can visit local businesses and ask them about the problems that they are facing.

Prepare a project of computer science which should be research or experiment based (working project), where every aspect of the topic selected should be discussed. The project should have the following key aspects:

Certificate

Acknowledgement

Why was this selected? (Related to daily life)

Introduction

Details of the project

Input code

Output

Result

Bibliography (mention the links)

For example, if a business is finding it hard to create invoices for filing GST claims, then students can work on a project that takes the raw data (list of transactions), groups the transactions by category, accounts for the GST tax rates, and creates invoices in the appropriate format. Students can be extremely creative here. They can use a wide variety of Python libraries to create user friendly applications such as:

1. Hotel Management
2. Library Management
3. Online Auction System
4. e-Authentication system
5. Gas Management System
6. Grocery Shop Billing
7. Hospital Management System
8. Criminal Record Management
9. Search engine
10. Online eBook maker
11. Mobile wallet with merchant payment
12. Automobile Service Station
13. Banking Management
14. Face Detection Software System
15. Cable Connection Management
16. Computer Service & Sales Management
17. Courier Service Management
18. CD And DVD Management
19. Food Processing System
20. Mobile Wallet with Payment Option
21. School Monitoring Software
22. Railway Reservation System
23. LIC Policy Management
24. Fee Accounting Software
25. Payroll or Salary Management
26. Employee Management
27. Pharmacy Management System
28. Movie Ticket Management
29. Airlines Reservation System
30. ATM Banking system

Each student must prepare and submit the following:

1. Menus and Submenus on the basis of topic selected by him/her and get it approved by sharing it As MS Word document.
2. Project has to be made using File handling (any one of these)–
 - Binary File Handling
 - CSV File Handling
 - Mysql and Python Connectivity (Python -Front end, MySQL- Backend)
3. Basic CRUD operations must be incorporated in each project- CRUD is an acronym that comes from the world of computer programming and refers to the four functions that are considered necessary to implement a persistent storage application: create, read, update and delete.
4. Each project has to be designed using Python programming Language.
5. You will start coding in Python only after approval of Topic and its options.

Project should be aesthetically prepared. Print out of the content is not allowed, only data or pictures can be printed and the same has to be approved first. Project should be on A-4 size plain sheets and the limit of the project is 15-20 pages.

Week 1 -

1. Write a Python program to sum all the items in a list.
2. Write a Python program to get the largest number from a list.
3. Write a Python program to count the number of strings where the string length is 2 or more and the first and last character are same from a given list of strings.
Sample List : ['abc', 'xyz', 'aba', '1221']
4. Write a Python program to remove duplicates from a list.
5. Write a Python program to generate and print a list of first and last 5 elements where the values are square of numbers between 1 and 30 (both included).

Week 2 -

1. Write a Python program to count the number of characters (character frequency) in a string.
Sample String : google.com'
Expected Result : {'o': 3, 'g': 2, '.': 1, 'e': 1, 'l': 1, 'm': 1, 'c': 1}
2. Write a Python program to get a string from a given string where all occurrences of its first char have been changed to '\$', except the first char itself.
Sample String : 'restart'
Expected Result : 'resta\$t'
3. Write a method in python to display the elements of a list twice if it is a number and display the element terminated with '*' if it is not a number.
4. Write a user defined function findname(name) where name is an argument in python to delete phone number from a dictionary phonebook on the basis of the name ,where name is the key.
5. Write a program to input employee number and name for N employees and display all employees' information in ascending order of their employee number.

Week 3 -

Q1 Write SQL command to create the following table STUDENT with constraints

Field Name	Type	Width	Constraints
Rollno	int		Primary key
Stud_Name	varchar	25	
DOB	date		
Subject	varchar	24	
Marks	int		

Q2 Consider the following table: Movierental and write SQL statement for (a) and (b):

reference_ number	transaction_ date	return_date	membership_ number	movie_id	movie_ returned
11	20-06-2012	NULL	1	1	0
12	22-06-2012	25-06-2012	1	2	0
13	22-06-2012	25-06-2012	3	2	0
14	21-06-2012	24-06-2012	2	2	0
15	23-06-2012	NULL	3	3	0

a) to get the number of times that the movie with id 2 has been rented out(omit duplicates)

b) to display the latest movie rented.

Q3 Based on the following tables PRODUCT and CLIENT, answer the following queries:

PRODUCT:

P_ID	ProductName	Manufacturer	Price	Discount
TP01	Talcom Powder	LAK	40	
FW05	Face Wash	ABC	45	5
BS01	Bath Soap	ABC	55	
SH06	Shampoo	XYZ	120	10
FW12	Face Wash	XYZ	95	

CLIENT:

C_ID	ClientName	City	P_ID
01	Cosmetic Shop	Delhi	TP01
02	Total Health	Mumbai	FW05
03	Live Life	Delhi	BS01
04	Pretty Woman	Delhi	SH06
05	Dreams	Delhi	FW12

i) to display ProductName and Price for all products whose Price is in the range 50 to 150.

ii) to display details of product whose manufacturer is either XYZ or ABC

iii) to display ProductName, Manufacturer and Price for all products that are not given any discount.

iv) to display ClientName, City, P_ID and ProductName for all clients whose city is Delhi.

v) Which column is used as Foreign Key and name the table where it has been used as foreign key?

Q4 a) Consider the following Table: CUSTOMER

customer_id	cust_name	city	grade	salesman_id
3002	Nick Rimando	New York	100	5001
3007	Brad Davis	New York	200	5001
3005	Graham Zusi	California	200	5002
3008	Julian Green	London	300	5002
3004	Fabian Johnson	Paris	300	5006
3009	Geoff Cameron	Berlin	100	5003
3003	Jozv Altidor	Moscow	200	5007

Write the SQL statements for the following conditions (a) to (f):

- to display all customers in New York who have a grade value above 100.
- to display those customers who are neither belongs to the city London nor grade value is more than 200
- to sort out those customers with all information whose ID value is within any of 3007, 3008 and 3009.
- to find those customers with all other information and name started with any letter within 'A' and 'K'
- to display the grade with the percent sign (%) with salesman ID and city columns for all the customers
- fetching the "cust_name" from customer table in upper case.

Q5) Create a table G20 in SQL with the following attributes countryname, economicbenefits, socialbenefits, politicalbenefits, strength, weakness, opportunities and threats. Insert minimum 5 rows.

PSYCHOLOGY

As per CBSE CURRICULUM 2023-24

PRACTICAL FILE- Students are required to administer and interpret five psychological tests related to various psychological attributes like intelligence, aptitude, attitude, personality, etc.

Here is the list of 5 practicals which should be there in the psychology practical file.

1. Raven's Standard Progressive Matrices
2. Maudsley's personality Inventory
3. Adjustment inventory for school students
4. Sinha's comprehensive anxiety test
5. Self-Concept Questionnaire

PSYCHOLOGICAL TESTS IN LINK-

https://drive.google.com/drive/folders/1TpAMpfRfjGehKr_jgGetY0ItJNuBYnlo?usp=sharing

ORDER OF PRACTICAL FILE-

1. Aim
2. Basic Concept
3. Reliability
4. Validity
5. Preliminaries (Name, age, gender, class, time, place of conduction)
6. Material Required
7. Rapport Formation
8. Instructions
9. Administration
10. Introspective Report
11. Scoring
12. Interpretation

13. Observation
14. Conclusion
15. References

MATERIALS REQUIRED-

A4 size sheets (One side plain one side ruled)

Practical file's cover should be white color with a creative cover page.

Kindly note the following points for the practical file.

1. All questionnaires to be pasted except for raven's
2. Scoring key and norm table should be pasted in the practical file.
3. Interpretation, conclusion and reference to be completed for each practical.
4. File should be covered with white paper.
5. All 5 practical's should be completed
6. Practical file should look neat.

BIOLOGY

1. Project Report : Create a biology project based on research, case study, or experiment. The project should cover all aspects of the chosen topic and include the following key components:

- Certificate of completion
- Acknowledgment section
- Explanation of why the topic was chosen and its relevance to daily life
- Introduction to the topic
- Detailed description of the project, including methodology and materials used
- Presentation of experiment or case study
- Discussion of observations and conclusions drawn from the project
- Analysis of findings and their significance
- Results section
- Discussion of future research directions for the topic
- Bibliography, including links and references used

The project should be presented in an aesthetically pleasing manner, using A4 size plain sheets. The content of the project should not be printed out, but rather presented using data or pictures. The project length should be limited to 15-20 pages.

2. Art Integration :

The Andaman and Nicobar Islands are home to a diverse range of plant species, including several endemic ones. Research about the endemic plant species found in Andaman and Nicobar Islands and create two botanical illustrations of some of these plants. Students have the freedom to choose the medium they want for creating precise and elaborate botanical illustrations, be it watercolors, colored pencils, or any other artistic material they prefer.

3. Practice Assignment :

Practice the assignment questions in the biology notebook.

Link **for** **assignment:**
<https://docs.google.com/document/d/1CknFPXh7CJCw4eGahZdNfU5c154pV4kj8lkRRPKh/q7s/edit?usp=drivesdk>