GIRLS' HIGH SCHOOL & COLLEGE, PRAYAGRAJ

SESSION - 2023-24

HOLIDAY HOMEWORK

CLASS: X

SUBJECT: ENGLISH LANGUAGE

INSTRUCTIONS:

The students should do the English Language Holiday Home Work in their Language Classwork Register.

1.INFORMAL LETTER:

You wish to become a model while your parents want you to become an engineer. Write a letter to your mother giving reasons why you should be allowed to pursue your ambition.

2. NOTICE WRITING:

Your school is hosting an inter-school Science Exhibition. Write a notice for your school informing the students about the exhibition.

SUBJECT: ENGLISH LITERATURE

INSTRUCTIONS:

The students should do the English Literature Assignment in their Literature Classwork Register.

BOOK: Treasure Trove: A Collection of ICSE Poems and Short Stories

WORKBOOKS: Treasure Trove (Workbook) A Collection of ICSE Poems by Selina

Treasure Trove(Workbook) – Volume – I : Poems by Xavier Pinto

Treasure Trove (Workbook) – A Collection of ICSE Short Stories by Selina

Treasure Trove (Workbook) – Volume – II :Short Stories by Xavier Pinto

Poem – I Know why the Caged Bird Sings

Question1: Write the paraphrase of the poem 'I Know why the Caged Bird Sings' by Maya Angelou. Compare the life of the caged bird with that of the free bird and show how the theme of freedom and enslavement is brought out in the poem.
(Word limit - 700 words)

Short Story – The Blue Bead

Question 2: Write the summary of Norah Burke's short story 'The Blue Bead'. State how 'The Blue Bead' is a tale of triumph of human courage.
(Word limit – 800 words)

SUBJECT: MATHEMATICS

PROJECT

INSTRUCTIONS– Project must include 20 pages. It should be made on inter-leaf sheets.
Paste the pictures and the logo of the bank.

NOTE – For the specific question students need to check the website.

Contents of the project must include the following topics

1. Topic – Banking

(a) Acknowledgement

(b) Index

(c) Introduction/ History of Banking

(d) Types of Bank Account (write at least 4 types and describe it also)

(e) Types of cheques. (Paste the picture of cheque.)

(f) Survey on the different rate of interest offer on different account by four banks.Take two private banks and two government banks.

PRIVATE BANKS : example HDFC

GOVERNMENT BANKS: example SBI

Paste a logo

HDFC BANK:

ACCOUNT	RATE OF INTEREST
Saving bank A/C	6%
Current bank A/C	0.0%

HDFC BANK	
Write few lines about this	

(g) Conclusion –You have to compare which bank pays better rate of Interest.

2. Topic – Planning a home Budget

(a) What is Budget?

(b) Types of budget (4 types and describe it also)

(c) Planning home budget

You have to decide the monthly income.

For example –The monthly income is Rs 36000/- at least 10 items you have to include.

S.No.	Items	Expenditure	Central angle
1	House Rent	Rs 4800/-	$\frac{4800}{36000} \times 360^0 = 48^0$
2	Fooding	Rs 6000/-	$\frac{6\,000}{36000} \times 360° = 60°$

With the help of central angle you have to draw a pie chart and colour it also.

You have to draw a Bar Graph. On the X-axis "Items" should be written and on the Y-axis "Expenditure" should be written.

Conclusion – What will be the saving in the end?

BIBLIOGRAPHY

SUBJECT: HISTORY/CIVICS

Title Page- First War of Independence
Acknowledgement
Index
1st- 2nd Page- Introduction
3rd-5th Page- Political Causes
6th -8th Page- Religious & Social Causes
9th -11th Page- Economic Causes
12th-14th Page- Military Causes
15th Page- Immediate Cause
16th -18th Page- Results of the First War of Independence
19th Page- Conclusion
20th Page- Bibliography

NOTE:-Paste coloured or black and white pictures on each page related to the topic (Interleaf pages). Headings and sub-headings to be written with black sketch pen, written work with blue or black pen, picture frames and page borders should be drawn neatly with black pen or sketch pen. Each picture is to be labeled properly.
Page limit- 23 pages.

File is to be covered with Brown paper.

SUBJECT: GEOGRAPHY
PROJECT

Topic: Tourism in India
Total Pages- 25
Sub Headings:

- Acknowledgement
- Index
- Meaning of Tourism
- Brief History of Tourism in India
- Famous tourist destinations in India
  (i) Heritage tourism: (eg. Taj Mahal, Qutub Minar etc.,)
  (ii)Eco Tourism (backwaters of Kerala etc.)
  (iii)Adventure Tourism (Trekking the Himalayas)
  (iv)Cultural Tourism (visiting the tribal lands in Odisha, Jharkhand etc.)
- Steps taken by the Government of India and various state governments to promote and develop tourism in India (like the theme of Incredible India).
- Challenges to the Tourism Industries
- Conclusion
- Bibliography

Note: Left hand side of the page should have pictorial representation and sub headings written underneath the pictures.

SUBJECT : PHYSICS PRACTICAL

Instructions:

1. The student have to write all experiments in Physics Practical Note-Book.
2. Each experiment should start from a new page.
3. Well labelled diagrams to be drawn on the left page only.

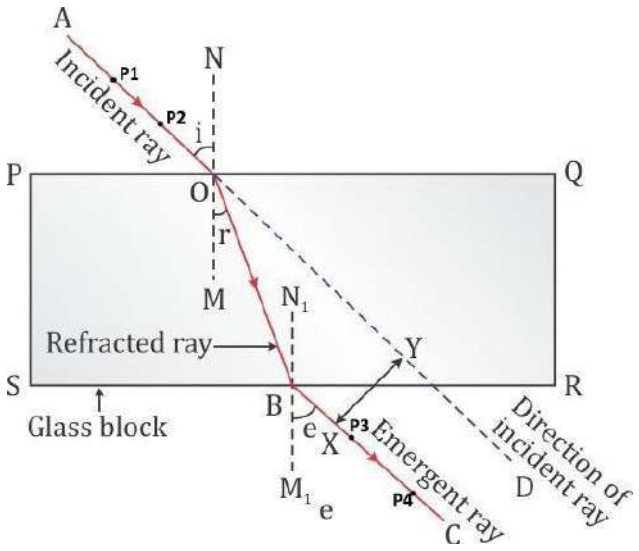
EXPERIMENT No.4

AIM: To show that after refraction through a glass slab, the emergent ray is parallel to incident ray in a glass block.

APPARATUS USED: A glass block, a drawing board, a white sheet of paper, pencil, ruler, board pins, protractor and common pins.

LAWS OF REFRACTION:

1) The incident ray, the refracted ray and the normal at the point of incidence, all lie in the same plane.
2) The ratio of the sine of the angle of incidence to the sine of the angle of refraction **r** is constant for the pair of given media.



OBSERVATIONS AND CALCULATIONS:

Sl.No.	Angle of incidence ray i (in degrees)	Angle of emergent ray e (in degrees)
1		
2		

3		
4		

RESULT: As observed from the observation sheet, the emergent ray makes the same angle with the glass block as made by the incident ray. This shows that emergent ray goes parallel to the incident ray.

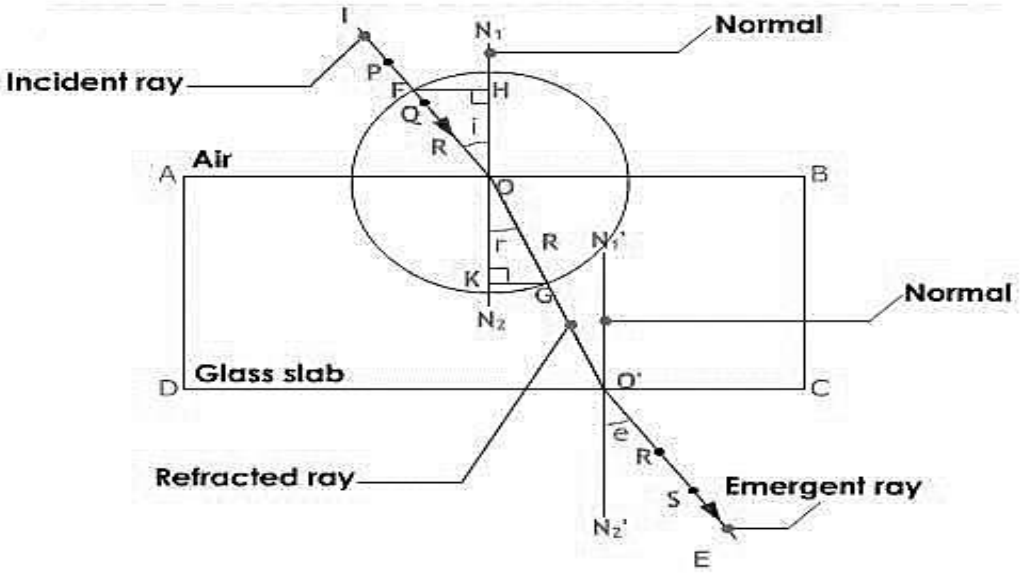
EXPERIMENT NO.5

AIM: To determine the refractive index of the material of the glass block.

APPARATUS USED: A drawing board, a glass block, drawing pins, common pins, a white sheet of paper, compass, protractor, pencil and ruler.

LAW USED: According to Snell's law, the ratio of the sine of the angle of incidence **i** to the sine of the angle of the refraction **r** is constant for the pair of given media.

Numerically, this constant ratio is equal to the refractive index of the second medium with respect to the first medium.



Refractive index (n) = sin i/sin r

= (FH/FO)/(KG/GO)

= (FH/FO)/(KG/FO)

= FH/KG

OBSERVATIONS AND CALCULATIONS:

Sl.No.	Angle of incidence i (in degrees)	FH (in cm)	KG (in cm)	Refractive index (n)=FH/KG
1				
2				
3				
4				

Mean refractive index = ……..

= ……

= ……..

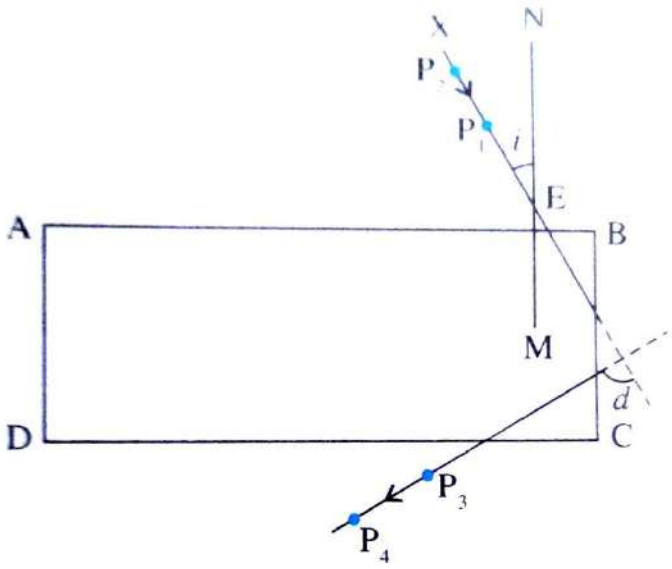
RESULT: The refractive index of a given glass block as obtained from the above experiment =**……**

EXPERIMENT NO.6

AIM: To investigate the deviation of a ray of light after it suffers total internal reflection from one face of a glass block.

APPARATUS USED: A drawing board, a glass block, drawing pins, common pins, a white sheet of paper, protractor, pencil and ruler.

LAW USED: Total internal reflection is a phenomenon of reflection of ray of light back to the same medium when passing from denser medium to rarer medium in such a way that angle of incidence is greater than its critical angle.



OBSERVATIONS AND CALCULATIONS:

Sl. No.	Angle of incidence i (in degrees)	Angle of deviation d (in degrees)
1.		
2.		
3.		
4.		

From graph -

……..

……

……..

……..

RESULT: The value of S = ……..

EXPERIMENT NO.7

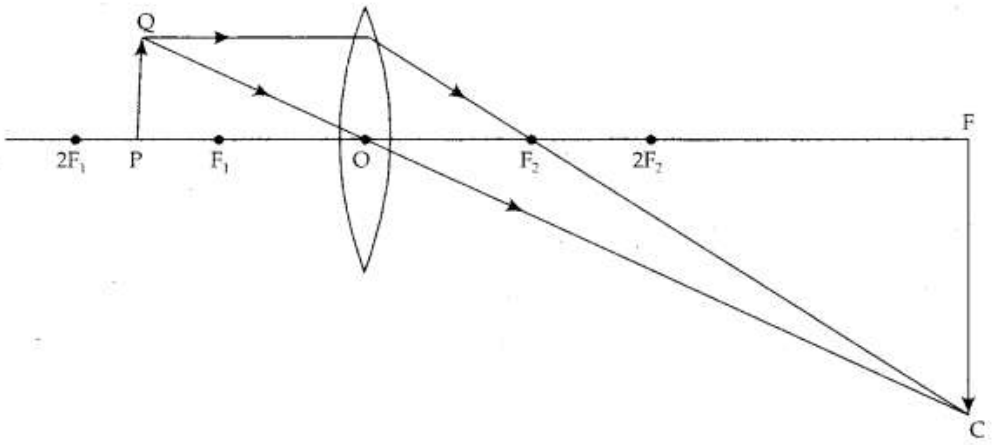
AIM: To determine the focal length of a given convex lens measuring u and v.

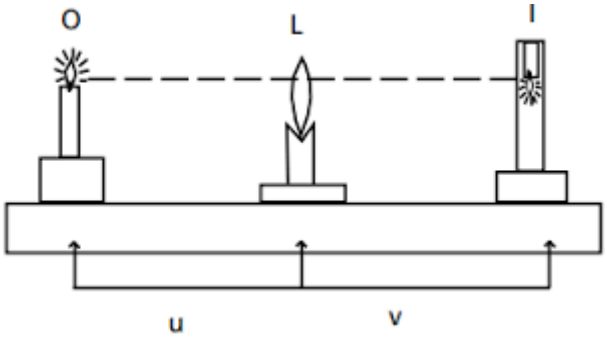
APPARATUS USED: A convex lens, a metre scale, lens holder, pin holder, a lighted candle, screen.

PRINCIPLE : When an object is placed in front of a convex lens beyond its focus its real and inverted image is formed on the other side of the lens.

If u is the object distance and v is the image distance then focal length f is given by

$$\frac{1}{f} = \frac{1}{u} + \frac{1}{v}$$





OBSERVATIONS AND CALCULATIONS:

Sl. No.	Object Position (cm)	Lens Position (cm)	Screen Position (cm)	U (cm)	V (cm)	P=U + V (cm)	Q= UV (cm^2)	F = Q/P (cm)
1.								
2.								

3.								
4.								

Mean focal length = ……..

=……..

= …….

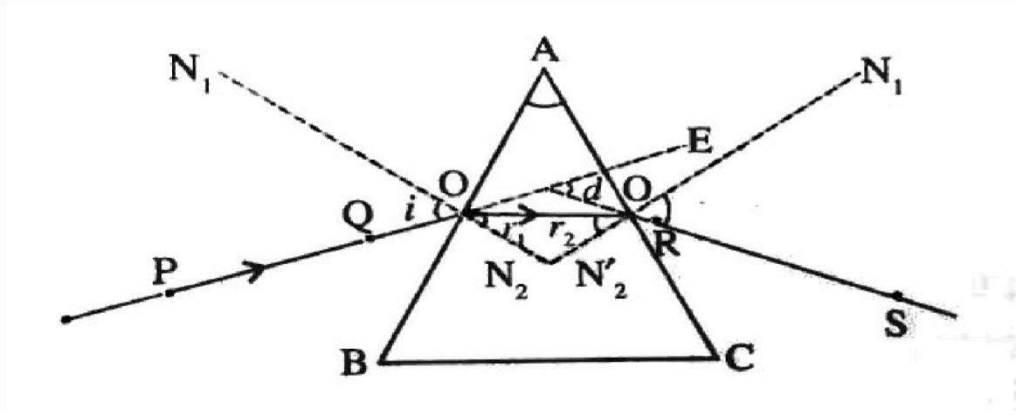
RESULT: The focal length of given convex length is F = …… cm.

EXPERIMENT NO.8

AIM: To determine the minimum deviation produced by the equilateral glass prism.

APPARATUSUSED: A drawing board, a white sheet of paper, common pins, an equilateral prism, drawing pins, ruler, protractor and pencil.

PRINCIPLE: For a small angle of incidence, as the angle of incidence increases, the angle of deviation first decreases, reaches the minimum and the increases with the angle of incidence. The minimum value of angle of deviation reached is called the angle of minimum deviation.



OBSERVATIONS ANDC ALCULATIONS:

Sl. No.	Angle of incidence (in degrees)	Angle of deviation δ(in degrees)
1		

2		
3		
4		
5		
6		

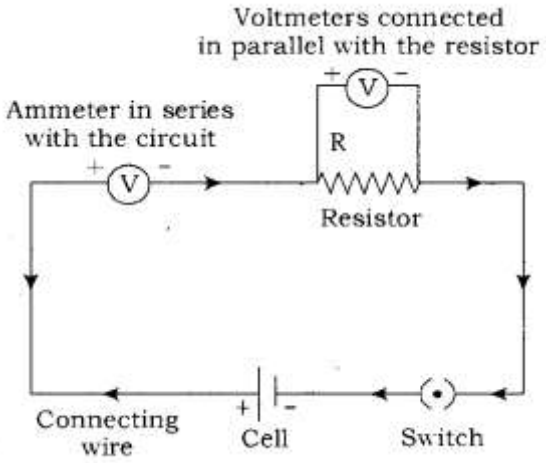
RESULT: From graph, the angle of minimum deviation=……..

EXPERIMENT NO.9

AIM: - To verify ohm's law using simple electric circuit.

APPARATUS REQUIRED: - Coiled resistor of 2 ohm, ammeter 0 – 3.0 A, voltmeter 0 -3-0 V, rheostat, key, battery 2.0V and connecting wires.

OHM'S LAW: - According to Ohm's law, the current flowing in a conductor is directly proportional to the potential difference applied across its ends provided that the physical conditions and the temperature of the conductor remain constant.



OBSERVATIONS AND CALCULATIONS:
Least count of the ammeter =**0.02** A
Least count of the voltmeter =**0.05** V

S. No.	**Ammeter Reading I** **(in amp.)**	**Voltmeter Reading V** **(in volts)**
1.		

2.		
3.		
4		

RESULT: - Since V – I graph is a straight line which verifies Ohm's law.

SUBJECT: CHEMISTRY

Instructions: Students are advised to write the following chemistry practicals (Exp. No. 1 to 6) in Chemistry practical file . These experiments are to be written neatly. The same pattern of writing is to be followed as given. Every experiment has to be started from a fresh page.

EXPERIMENT NO. 1

(A)

Take a little amount of the substance in a clean dry hard glass test tube and add a small quantity of conc. H_2SO_4 in it and heat it gently. Make your observations, identify the gas evolved and give your deduction.

(1) Observations:

(i) A colourless, pungent and suffocating gas is evolved.

(ii) The gas turns moist blue litmus paper red.

(2) **Confirmatory test for the gas**:
When a glass rod dipped in NH_4OH solution is brought near the evolved gas, it gives dense white fumes. Thus, the gas evolved is HCl.

(3) **Name of an anion:** Cl^- (chloride ion)

(4) **Deduction**: The given salt is chloride salt.

(B)

Add a small quantity of conc. H_2SO_4 and manganese dioxide (MnO_2) to the given substance and heat it gently. Make your observation, identify the gas evolved and give your deduction.

(1) Observations:

(i) A gas of choking odour is evolved.

(ii) A greenish yellow coloured gas is evolved.

(iii) The gas evolved turns moist blue litmus paper red and finally bleaches it.

(iv) It turns starch iodide paper blue-black.

(2) Confirmatory test for the gas:

Add silver nitrate solution to the water extract of the given substance. White precipitate appears which dissolves in excess NH_4OH solution. Thus, the gas evolved is chlorine.

(3) **Name of an anion**: Cl^- (chloride ion)

(4) **Deduction**: The given salt is chloride salt.

EXPERIMENT NO. 2

(A)

Take a small amount of the substance in a clean hard glass test tube and add small amount of NaOH in it. Warm the mixture gently, record your observations, identify the gas evolved and give your deduction.

(1) **Observations**:
   (i) The evolved gas is colourless.
   (ii) The evolved gas has pungent smell.
   (iii) The evolved gas turns moist red litmus paper blue, hence it is basic in nature.

(2) **Confirmatory test for the gas**:
   When glass rod dipped in HCl solution is brought near the evolved gas, dense white fumes appear. Evolved gas turns Nessler's reagent brown. Thus, the gas evolved is ammonia (NH_3).

(3) **Name of the cation**: NH_4^+

(4) **Deduction:** The given salt is ammonium salt.

(B)

Take a small amount of the substance in a clean dry hard glass test tube. Heat it first gently and then strongly. Make your observations, identify the gas evolved and give your deduction.

(1) Observations:
   (i) The gas evolved is colourless.
   (ii) It has a pungent smell.
   (iii) It turns red litmus blue.

(2) Confirmatory test for the gas:
   It gives dense white fumes with a rod dipped in HCl solution. Thus, the gas evolved is ammonia (NH_3).

(3) Name of the cation: NH_4^+

(4) Deduction: The given salt is an ammonium salt.

EXPERIMENT NO. 3

(A)

Take a small amount of the substance in a clean, dry, hard glass test tube and heat it strongly. Make your observations, identify the gas evolved and give your deduction.

(1) Observations:
   (i) On strong heating, the light amorphous white solid, changes to pale yellow.
   (ii) Gives off a colourless and odourless gas that turns lime water milky. The milkiness disappears on passing excess of gas.
   (iii) The gas has no effect on acidified $K_2Cr_2O_7$ or acidified $KMnO_4$.

(iv) The residue, on cooling, changes to a white colour i.e. residue is yellow when hot and white when cold.

(2) **Identification of the gas evolved**:
Since the gas turns limewater milky, but has no effect on acidified $K_2Cr_2O_7$ or acidified $KMnO_4$, therefore the gas evolved is carbon dioxide (CO_2).

(3) **Name of the anion**: Carbonate ion (CO_3^{2-})

(4) **Deduction**: The residue obtained is zinc oxide. The given substance is zinc carbonate.

(B)

Take a little portion of the substance in a clean hard glass test tube. Add dilute HCl in it. Make your observations, identify the gas evolved, name the anion and give your deduction.

(1) Observations:

(i) On adding dil. HCl to the given substance, a gas is evolved with brisk effervescence.

(ii) The gas turns blue litmus paper red.

(iii) The gas turns limewater milky, but has no effect on acidified $K_2Cr_2O_7$.

(2) **Identification of the gas evolved**:
Since the gas turns limewater milky, but has no effect on acidified $K_2Cr_2O_7$, therefore it is CO_2 gas and negative radical is CO_3^{2-}

(3) **Name of the anion**: carbonate ion (CO_3^{2-})

(4) **Deduction:** The given substance is a carbonate salt.

(C)

You are given a solution. To the little portion of this solution, add NaOH solution drop by drop and then in excess. Make your observations, name the cation and give your deduction.

(1) Observation:

(i) On adding NaOH solution drop by drop, white gelatinous precipitate is formed. The white precipitate is dissolved in excess of NaOH giving a clear solution.

(2) **Name of the cation**: Zinc ion (Zn^{2+})

(3) **Deduction**: The white precipitate is of $Zn(OH)_2$. The white precipitate dissolves in excess of NaOH due to the formation of Na_2ZnO_2. $Zn(OH)_2$ dissolves in excess of NaOH because it is amphoteric in nature.

(D)

Take a small amount of the given solution and add NH_4OH solution drop by drop and then in excess. Make your observations, name the cation and give your deduction.

(1) **Observation**: On adding NH_4OH solution drop by drop, white gelatinous precipitate is formed which dissolves in excess of NH_4OH solution.
(2) **Name of the cation**: zinc ion (Zn^{2+})
(3) **Deduction**: The white precipitate is of zinc hydroxide. It dissolves in excess of NH_4OH due to the formation of tetraamminezinc(II)sulphate.

EXPERIMENT NO. 4

(A)

Take a small amount of the substance in a clean dry glass test tube, heat it first gently and then strongly. Make your observations, identify the gas evolved and give your deduction.

(1) **Observations:**
   (i) On heating the given substance, a hissing sound is produced and droplets of a colourless liquid condense on the upper cooler parts of the test tube.
   (ii) On heating it strongly, a white residue is left behind.
   (iii) On very strong heating, the white residue changes to a black residue and a colourless pungent smelling gas is evolved.
   (iv) The gas turns moist blue litmus red.
(2) **Identification of the gas evolved:**
   (i) The colourless liquid turns cobalt chloride paper pink. Hence there is water of crystallization.
   (ii) The pungent smelling gas turns acidified $K_2Cr_2O_7$ paper green, hence it is SO_2
(3) **Deduction:**
   (i) It is a hydrated salt and the gas evolved is sulphur dioxide.
   (ii) The white residue formed on heating is of anhydrous copper sulphate.
   (iii) On very strong heating the substance gives black residue which is of copper(II)oxide.

(B)

Prepare a solution of the given substance in water and perform the following experiments with different portions of the solution.

(B-1)

To the first portion of the solution, add NaOH solution drop by drop and then in excess. Record your observation, name the cation and give your deduction.

(1) **Observation:**

(i) On adding NaOH, a blue precipitate is obtained.
(ii) The blue precipitate is insoluble in excess of NaOH.

(2) **Name of the cation:** copper (Cu^{2+})

(3) **Deduction:** The blue precipitate obtained is of copper hydroxide. On heating the blue precipitate a black precipitate is obtained which is of copper(II)oxide (CuO).

(B-2)

To the second portion of the solution add NH_4OH solution drop by drop and then in excess. Record your observations and give your deduction.

(1) **Observations:**
(i) On adding NH_4OH drop by drop, a bluish white precipitate is obtained which dissolves in excess NH_4OH forming deep blue colour (Prussian blue).

(2) **Deduction:**
(i) The bluish white precipitate is of copper hydroxide.
(ii) Deep blue colour of the solution is obtained on adding excess NH_4OH due to the formation of tetraamminecopper(II)sulphate.

(B-3)

To the third portion of the solution, add a few drops of dilute HCl and then add barium chloride solution ($BaCl_2$). Make your observation, name the anion and give your deduction.

(1) **Observations:**
(i) On adding barium chloride, a thick white precipitate is obtained.
(ii) Precipitate is insoluble in dil. HCl.

(2) **Name of the anion: Sulphate ion** (SO_4^{2-})

(3) **Deduction:** The given substance is hydrated copper sulphate salt.

EXPERIMENT No. 5

(A)

Prepare the aqueous solution of the given substance, divide it into three parts and perform the following experiments.

(A-1)

To the first part of the solution add NaOH drop by drop and then in excess. Make your observations, name the cation and give your deduction.

(1) **Observation**:

(i) The original solution is pale green in colour.
(ii) On adding NaOH drop by drop, a dirty green precipitate is obtained.
(iii) On adding excess NaOH, dirty green precipitate does not dissolve.

(2) **Name of the cation**: Ferrous ion (Fe^{2+})

(3) **Deduction**:
(i) Dirty green precipitate is obtained due to the formation of ferrous hydroxide.
(ii) The given salt is a ferrous salt.

(A-2)

To the second part of the solution, add 4-5 drops of concentrated nitric acid and boil. Add NaOH to it. Make your observations, name the cation and give your deductions.

(1) **Observation**:
(i) On boiling the original solution with concentrated nitric acid, it turns brownish yellow.
(ii) On adding NaOH solution, reddish brown precipitate is formed.
(iii) On adding excess NaOH, the precipitate does not dissolve.

(2) **Name of the cation**: Ferric (Fe^{3+})

(3) **Deduction**: On boiling the solution with concentrated nitric acid, it becomes brownish yellow because ferrous is oxidized to ferric. On adding NaOH solution reddish brown precipitate is obtained due to the formation of ferric hydroxide.

(A-3)

To the third part of the solution, add a few drops of dil. HCl and barium chloride solution. Make your observations, name the anion and give your deduction.

(1) Observation:
(i) On adding barium chloride, a thick white precipitate is obtained which is insoluble in dil. HCl

(2) **Name of the anion**: Sulphate ion (SO_4^{2-})

(3) **Deduction:** The white precipitate is of barium sulphate and the salt provided was of ferrous sulphate.

EXPERIMENT No. 6

(A)

Take a small amount of the given salt in a clean test tube and add dil. HCl. Make your observations, identify the gas evolved, name the anion and give your deduction.

(1) Observations:

(i) On adding dil. HCl to the given salt, a gas is evolved with brisk effervescence.

(ii) The gas is colourless and odourless

(iii) The gas turns blue litmus red, hence it is acidic in nature.

(iv) The gas turns limewater milky but has no effect on acidified $K_2Cr_2O_7$ solution.

(2) **Identification of the gas evolved**: The evolved gas is carbon dioxide.

(3) **Name of the anion**: Carbonate ion (CO_3^{2-})

(4) **Deduction:** The given salt is a carbonate salt.

(B)

To a little portion of the solution obtained on adding dil. HCl to the given salt, add NaOH solution drop by drop and then in excess. Make your observations.

(1) Observations:

(i) On adding NaOH solution drop by drop, a white precipitate is obtained.

(ii) In excess of NaOH, the precipitate does not dissolve.

(C)

To a little portion of the solution obtained in (A) i.e. on adding dil. HCl to the given salt, add NH_4OH solution drop by drop and then in excess. Make your observations, name the cation and give your deduction.

(1) **Observation**:

(i) On adding NH_4OH, no precipitate is formed.

(2) **Name of the cation**: Calcium ion (Ca^{+2})

(3) **Deduction**:

(i) On adding NaOH to the salt solution, white precipitate of calcium hydroxide is formed, but there is no precipitate formed on adding NH_4OH solution.

The given salt is calcium carbonate.

SUBJECT: BIOLOGY

Instructions:

The following experiments to be written in Biology practical file.

All experiments are to be neatly written with a blue pen only however the students can use a black pen for headings.

EXPERIMENT No 1

Aim-To study the different stages of Mitotic cell division in Plant cells.

Materials required- Microscope and permanent glass slides showing different phases of mitosis.

Method- Focus permanent glass slides showing different stages of mitosis under the microscope.

Observation- Mitosis involves two main stages; karyokinesis (division of nucleus) and cytokinesis (division of cytoplasm).

The following phases of karyokinesis are observed in the given permanent slides.

1.**Prophase**-

(I)The chromosomes begin to coil and become shorter and thicker.

(ii)Each chromosome is in a duplicated form and consists of two sister chromatids.

(III)The two sister chromatids are attached to each other at a small region called centromere.

(iv)The nuclear membrane and the nucleolus disappear.

(v)Spindle Fibres (formed by microtubules) appear.

2. **Metaphase**

(I)The duplicated chromosomes arrange on the equatorial plane .

(ii)Each chromosome gets attached to the spindle fibre by its centromere.

3. Anaphase

(I)The centromere attaching the two chromatids divides.

(ii)The two sister chromatids of each chromosome separate and are drawn apart towards opposite poles
due to contraction of spindle fibres.

4. **Telophase**

(I)The chromatids form two groups, one on either pole of the spindle.

(ii)Each chromatid or daughter chromosome uncoils and forms thin thread like chromatin fibre.

(III)Spindle fibres disappear.

iv)Nuclear membrane reappears.

(vi)Nucleolus reappears in each daughter nucleus.

(vi)A cell plate is laid down in the cytoplasm at the equatorial plane

Cytokinesis

The cell plate grows from the centre to the periphery and finally divides the cell into two daughter cells.

EXPERIMENT No. 2

AIM-To study the diffusion of potassium permanganate crystals in water.

Materials required-A beaker,water and potassium permanganate crystals.

Method-Take a beaker containing water.Drop a small crystal of potassium permanganate in one corner of the beaker. Observe for some time.

Observation-We observe that the potassium permanganate crystal slowly start dissolving. The molecules of potassium permanganate move from a region of their higher concentration to a region of their lower concentration.

After some time the molecules of potassium permanganate distribute uniformly throughout water.

Conclusion-This experiment shows that the molecules of potassium permanganate are diffused ,or uniformly distributed throughout water.

EXPERIMENT No. 3

AIM-To study Osmosis using potato osmoscope.

Materials required-A large sized potato , beaker,knife, water and 25% sugar solution.

Method-Take a large sized potato.Peel off its skin and make its base flat.

Make a rectangular cavity in the centre of the potato.

Fill the cavity of the potato with 25% sugar solution .

Mark the initial level of sugar solution in the cavity of the potato,with the help of a pin.

Place the potato in a beaker containing plain water.Leave it for 2-3 hours.

Observation-The level of sugar solution in the potato osmoscope rises.
Conclusion-The sugar solution in the osmoscope is separated from pure water by means of potato tuber cells.Each cell of potato has a cell wall which is permeable,and a plasma membrane which is a semi permeable membrane .Water enters the cell due to osmosis.Cell to cell osmosis results in the entry of water in the osmoscope and so the level of sugar solution in the potato osmoscope rises.

EXPERIMENT NO. 4

Aim-To show that transpiration occurs from the arial parts of the plant.

Materials required-A small-sized, well- watered potted plant,a polythene bag and a string.

Method—Take a small sized ,well-watered potted plant.Cover the plant with the help of a transparent polythene bag and tie its mouth at the base of the stem.Leave the set-up undisturbed for 2-3 hours in sunlight.

Observation-Drops of water appear on the inner side of the polythene bag tied around the plant.

Conclusion- Drops of water that appear on the the inner side of polythene bag are due to saturation of water vapour given out by the leaves .This shows that water vapour is given out during Transpiration.

EXPERIMENT NO. 5

Aim-To show that more transpiration occurs from the lower surface of a dicot leaf.

Materials required-A well-watered potted dicot plant, two pieces of cobalt chloride paper(2x4sq

cm), two glass slides and some paper clips.

Method-Take a well- watered potted dicot plant.

Place one piece of cobalt chloride paper over a glass slide and hold it on the lower side of the leaf and the other paper on the upper side of the leaf in a similar manner.

Fasten both slides with the help of paper clips.

Observe for about an hour.

Observation-The piece of cobalt chloride paper on the lower surface of the leaf turns pink very fast while the paper on the upper surface remains blue or takes a longer time to turn pink.

Conclusion-This experiment shows that more transpiration takes place from the lower surface of the leaves of dicot plants than from the upper surface .This is because in a dicot leaf more stomata are present on the lower surface than on the upper surface.

EXPERIMENT NO 6

Aim-To show that light is necessary for photosynthesis.

Materials required-A well- watered potted plant , strips of black chart paper and paper-clips.

Method-Take a well -watered potted plant and destarch its leaves by keeping it in dark for two days.

Take strips of black paper and cover both the upper and lower surfaces of a leaf.Clip the strips tightly.

Leave the set-up in sunlight for4-6 hours.

Detach the leaf and test it for the presence of starch.

Observation-It is observed that only those parts of the leaf that could get light turn blue -black showing the presence of starch in it.

Conclusion-This experiment shows that light is essential for photosynthesis.

EXPERIMENT NO.7

Aim-To show that carbon dioxide is essential for photosynthesis.

Materials required-A well watered potted plant,conical flask,split cork,potassium hydroxide and a stand.

Method-Take a well-watered potted plant and destarch its leaves by keeping it in dark for about two days.Take a conical flask and put some potassium hydroxide in it.Potassium hydroxide absorbs carbon dioxide.Insert one leaf into the conical flask through a split cork.

Leave the set-up in sunlight for 2-3 hours.

After 2-3 hours take out this leaf from the conical flask and pluck it from the plant.Take one more leaf from the same plant .Test both these leaves for the presence of starch

Observation-The leaf inserted in the conical flask does not turn blue-black when tested for starch with iodine solution while the one that was exposed to atmospheric air turns blue-black.

Conclusion-This experiment shows that carbon dioxide is necessary for photosynthesis.

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EXPERIMENT NO.8

Aim -To show that oxygen is produced during photosynthesis

Materials required-A beaker,a conical flask ,a test tube,water and some aquatic plants such as hydrilla.

Method- Take some aquatic plants such as hydrilla in a beaker containing water and cover them by a short- stemmed funnel.

Invert a test-tube full of water over the stem of the funnel.Place the set -up in sunlight for a few hours.

Observation- Bubbles of gas arise from the plants.These bubbles rise upwards and collect in the test -tube .On testing this gas with the help of a glowing wooden splinter we find that the wooden splinter bursts into flame,showing the presence of oxygen in the test tube.

Conclusion- This experiment shows that oxygen is produced during photosynthesis.

CLASS – X - C, D, E

SUBJECT: COMPUTER APPLICATIONS

PROJECT

Reference Book: LOGIX Class 10 (KIPS Publications)

INSTRUCTIONS: The students are expected to write 25 programs in java. The sequence of the programs will be as follows:

1. 3 programs based on if-else.
2. 2 programs based on switch case.
3. 3 programs on looping structure(e.g.: factorial, reverse of a number, sum of the digits of number, count and display divisors, Fibonacci series, etc).
4. 3 programs on nested loop (patterns and series).
5. 4 programs on numbers (eg: prime, Armstrong, automorphic, pronic, composite, palindrome, kaprekar, etc.).
6. 2 programs on method overloading.
7. 2 programs on String (Palindrome, Piglatin, Alphabetical order of characters, extracting vowels from string, counting number of words, etc.).
8. 4 programs based on Single dimensional array (linear search, binary search, bubble sort, selection sort).
9. 2 programs on Double Dimensional array (sum of the elements, display left and right diagonal, display lower and upper triangle of matrix, etc.).

Instructions for writing the project

- The students are expected to execute the above programs on the computer system on BlueJ.
- Write the executed programs on interleaf punched papers.
- The programs are to be written on ruled side and the variable descriptions on the blank side.
- Format of Variable Description:

Name of the variable	Data type	Purpose/Description

- The project is to be written with blue pen and the headings with black pen.
- The project is to be preceded by acknowledgement and index.
- The format of index is:

S. No.	Program	Remark

- No bibliography is required.

CLASS – X-B

SUBJECT – COMMERCIAL APPLICATIONS

PROJECT

INSTRUCTIONS:

1. There will be four separate assignments (Project) as per the topics given. Keep all four Assignments in one file. Cover the file with pink chart paper. Write Commercial Applications Project 2023-24 in the middle, Roll No. at the top right corner and Name, Class, Section, Admission no. should be written at the bottom right corner.
2. **Acknowledgement**
   Order of each Assignment:
   - Name of the topic (one page)
   - **Index** (only serial no., content and page no., should be of one page)
   - Subject Matter of the topic (Describe the topic with introduction, relevant headings and sub headings, supported with pictures/diagrams/graphs/tables, as per the requirement. Should not be more than 4 to 5 pages).
   - **Conclusion** (one page)
   - **Bibliography** (One page- Write the name of related websites and books consulted for the making of the assignment).
   - Note: same order will be followed for each topic.
3. Each assignment should not be more than 8 to 10 pages including all the points mentioned above.
4. Relevant pictures should be pasted neatly and must be bordered in black along with labelling or heading.
   Refer Course Book- Commercial Applications by Dr. C. B. Gupta.

Topics for the Assignments (Project):

1. Study the marketing strategies of a service sector company such as a Courier service and a Production company such as a pen manufacturer. Explain the differences and similarities in both the strategies. What do you think is the reason for these differences?
2. Study the Product Life Cycle (PLC). Using add-gel pens explain in which part of the PLC are they, giving valid justification.
3. Study five different advertisements in any one media (print, television, audio) of the FMCG (Fast Moving Consumer Goods) such as Coke, Pepsi, Lux, Surf, Tide, etc., and explain their positive and negative points.
4. Write an essay on the role of the Central Bank (Reserve Bank of India) in any economy with special reference to the Indian Scenario.

CLASS – X-A

SUBJECT – ART

Paper III: Original Imaginative Composition in Colour

1. Draw and paint a 'Park Scene'.
2. Paint a composition based on the topic 'An Outing with Friends'.
3. Draw and paint a 'Beach Scene'.

Paper IV: Applied Art

1. Draw and paint a 'Wedding Invitation Card'.
2. Draw and paint a book cover for a book titled 'Birds of India'.
3. Design and paint a poster on the topic 'Save Mother Earth'.

Project Work – Painting of Art File Cover

- Buy a file cover for your Art file.
- Cover it with chart paper (any colour).
- Paint and decorate the front cover beautifully with any painting, designs or motifs of your choice.
- In one corner of the front cover write you name, class, section and the academic year (2023-2024) in bold and neat letters.
- Paint or print designs on the back cover as well.

SUBJECT - HINDI

हिन्दी परियोजना कार्य (HINDI ASSIGNMENT)

नोट - अभिभावकों से अपेक्षा की जाती है कि वे यह सुनिश्चित करें कि छात्रा प्रपत्र में दिए गए निर्देशानुसार ही हिन्दी परियोजना कार्य पूर्ण करे।

1. आभार
2. विषय सूची (Index)

क्रम संख्या ।पृष्ठ संख्या ।विषय वस्तु ।दिनांक ।हस्ताक्षर

3. विषय वस्तु

प्रश्न1. महाकवि तुलसीदास जी का जीवन परिचय एवं साहित्यिक परिचय लिखिए।

(i) प्रस्तावना (ii) जीवन परिचय (iii) साहित्यिक विशेषताएँ - 1) रचनाएँ

2) पुरस्कार एवं उपाधियाँ (iv) काव्यगत विशेषताएँ - 1) भाषा शैली (2) रस, छन्द , अलंकार

(v) निष्कर्ष

प्रश्न2. निम्नलिखित उक्ति को आधार बनाकर एक मौलिक कहानी लिखिए,जिसकी शब्द सीमा 400 - 450 शब्दों में हो।

“जैसी करनी वैसी भरनी”

4. संदर्भित ग्रंथ

नोट - 1. अधिन्यास से संबंधित कार्य को पूर्ण करने हेतु छात्रा के लिए विज्ञान की प्रयोगात्मक कॉपी (Loose paper of Science Practical File) के पेज़ों का उपयोग करना अनिवार्य है।

2. कृपया फ़ाइल पर सफ़ेद रंग का कवर चढ़ा कर उस पर अपना नाम, कक्षा, /वर्ग एवं रोल नंबर अवश्य लिखें।यू.आई.डी. संख्या लिखने के लिए फ़ाइल के दाहिनी ओर ढाई इंच चौड़ी और एक इंच लम्बी चिट लगानी अनिवार्य है।