Vidyasagar School, Indore
Summer Assignment -2024-25
Class:- VI

English

Q1 . A self - absorbed nightingale is taught a lesson in humility and mutual respect by a little glow - worm. Do you agree with the statement? Give reasons for your answer.

Q2. Write the character sketch of Demeter and Persephone.

Q3 You are Chirag/ Chitra of class- VI. You have lost your English Book somewhere in the school. Write a notice in about 50 words requesting a finder to return it to you.

Hindi

1.आपके पिताजी ने नया शाकाहारी भोजनालय खोला है। अखबार में डालने हेतु पैम्पलेट तैयार कीजिए।

(शब्द सीमा- लगभग 50 -60 शब्द)

2. इंदौर के दो ऐतिहासिक स्थलों की सचित्र जानकारी लिखिए।

(शब्द सीमा - लगभग 100 शब्द)

Sanskrit

ग्रीष्मकालीन अवकाश हेतु *गृह कार्य*

कक्षा छटी संस्कृत

1 एक से चार तक संख्याओं के पुल्लिंग, स्त्रीलिंग व नपुंसकलिंग का सचित्र चार्ट बनाइए।

2 ईश वंदना के श्लोक अर्थ व चित्र सहित चार्ट बनाइए।

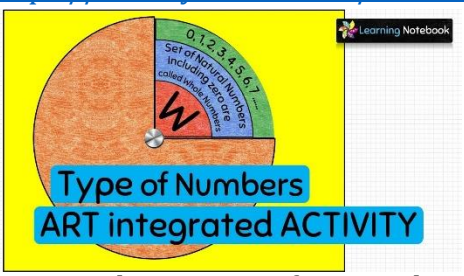
Mathematics

1. Find the difference between the greatest and the least 5-digit number that can be written using the digits 6, 2, 7, 4, 3 each only once.
2. A garment factory produced 216315 shirts, 182736 trousers, and 58704 jackets in a year. What is the total production of all the three items in that year?
3. In 2001, the populations of Tripura and Meghalaya were 3,199,203 and 2,318,822, respectively. Write the populations of these two states in Indian number system and international number system.
4. the digits 5 and 8 are interchanged in the number 1,80,025, find the difference between these two number.
5. A bus takes hours to complete its journey from khandwa to Indore. If the distance between Khandwa to Indore is 290 km then calculate the speed of bus.
6. Write the numbers for the following number names and insert comas at proper places.
(a) Five lakh one hundred twenty-one
(b) Eighty crore six thousand fifty-three
(c) Ninety-three lakh eight thousand seven
(d) forty-eight million five thousand two hundred five
(e) Eight million seven thousand five
7. A mobile number consists of ten digits. The first four digits of the number are 9, 9, 8, and 7. The last three digits are 3, 5, and 5. The remaining digits are distinct and make the mobile number, the greatest possible number. What are these digits?
8. Find the greatest 4- digit number which is exactly divisible by 88.

9. Determine the sum of the four numbers as given below:
i. successor of 32
ii. predecessor of 49
iii. the predecessor of the predecessor of 56
iv. the successor of the successor of 67

10. find on number line
a. 3+5
b. 7-3
c 4*2

MATHS LAB ACTIVITY
1. Collect the information from your surroundings/daily life, like population of some states/countries, food expenditure for one year, distance between earth and moon, planets and write them in Indian system and International system.
2. Design an art integrated activity from below link
https://www.youtube.com/watch?v=U2pLcRX93hM



3. Write the activities from Maths Lab pdf shared in your Maths lab manual.

Science &Technology

*"Health is Wealth "is a famous saying.
*Observed your diet for a week and make a table day and date wise mentioning the nutrients value you consumed.
*Think and write about Changes you need to be healthy and fit.

Social Science

- Sustainable development

*What is sustainable development?
*Explore different eco- friendly transportation modes, their environmental benefits and propose strategies for promoting them in your community, give examples.

*Paste pictures
*Hand Written Project.

Artificial Intelligence

Make a presentation on Computer Memory.
Follow these instructions:
Make a folder 'Lab Activity' in any drive.
2. Make a presentation consists of five slides which will include Introduction slide, Types of Computer Memory, Measurement units of Computer memory.
Apply different slide transition and animation effects on the slides. 4. Save the presentation as Computer Memory' in the main folder 'Lab Activity' and run.

Vidyasagar School, Indore
Summer Assignment -2024-25
Class:-VII

ENGLISH

Q 1.Personal Values guide and help us to grow personally. Social Values enable us to improve social relations.
So, make your value necklace in your English notebook-
a) Write the personal values that are important to you on beads of the necklace.
b) Write the social values that are important to you in the beads of another necklace.
Note : Refer to the image given on page number 30 of your course book.

Q2. Visit your nearest Post Office and arrange an inland letter. Now write a letter to your friend in the inland letter and mention how you spent your summer vacations, making it fruitful.
Note: Paste the inland letter in your English notebook and do not forget to write address of your friend on it.

HINDI

1. **आपके घर में छोटे भाई का जन्मदिन आगामी 28 जून को मनाया जाने है। इसके लिए एक निमंत्रण पत्र तैयार कीजिए।**
   (शब्द सीमा - 50 से 60 शब्द)
2. **अलग - अलग प्रकार के माँडनों में से किसी एक प्रकार के मांडने की जानकारी सचित्र चार्ट पर लिखिए।**
   (शब्द सीमा - लगभग 100 शब्द)

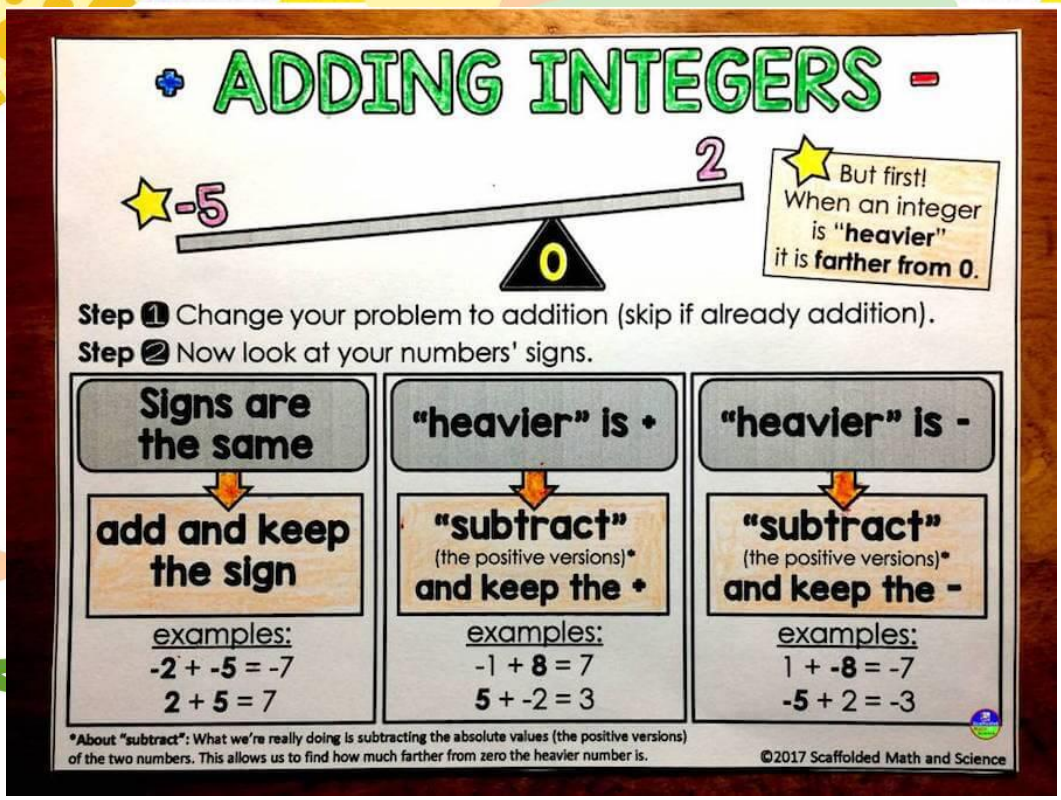
SANSKRIT

1 हमारे कोई चार पूजनीय वृक्षों के नाम संस्कृत में लिखकर सचित्र चार्ट बनाइए।

2 राजस्थान के किसी एक स्थल का चित्र तथा उस पर संस्कृत में पांच वाक्य लिखकर चार्ट बनाइए।

MATHS

1. Evaluate using properties:
(i) 89 − 58 + 28 − (−32)
(ii) 193 + 208 − {29 − (367)}
(iii) 56 − 34 + 235 − (123)
(iv) (84 − 34) × (84 + 45)
2 Evaluate:
(i) (−4) × (−15) × (−33)
(ii) (−1) × (−1) × (−1) × ⋯ 100 times
(iii) (−7) × (−4) × 5
3 An air conditioner cools a room by 4 ^{0}C /min. If the temperature of the room is 45 ^{0}C before switching on the air conditioner. Find the temperature of the room after switching on the air conditioner for 6 min.
4 Arrange the following fractions in ascending order:
(i) (3/8), (5/6), (6/8), (2/4), (1/3)
(ii) (4/6), (3/8), (6/12), (5/16)
5 Write five equivalent fraction of (3/5).
6 Find the sum:
(i) (5/8) + (3/10)
(ii) 4¾ + 9⅖
(iii) (5/6) + 3 + (3/4)
(iv) 2⅗ + 4⅞ + 2⅘
7 ART INTEGRATED ACTIVITY
i) Write all the properties of integers.
ii) Make a poster of your own showing the rules of adding or subtracting integer in your own creative / innovative way.



8 Write the activities from Maths Lab pdf shared in your Maths Lab Manual.

SCIENCE

"What we eat determines how well our digestive system works"

Draw a well labelled diagram of human digestive system and also write the measures to improve gut health.

SO.SCIENCE

*** Define Sustainable Development.**
*** Give examples and draw or paste related picture.**
*** Mention its features, goals and importance.**
*** Make some beautiful decorative items by using recyclable items like plastic bottles, mason jars, earthen pot and wooden sticks.**
(You can make pots to plant trees, birds feeders or jar tumblers)

ARTIFICIAL INTELLIGENCE

Make a Presentation on number system

Follow these instructions:

1. **Make a folder 'Lab Activity' in any drive.**
2. **Make a presentation consists of five slides which will include Introduction slide, decimal number system, binary number system, octal number system and hexadecimal number system.**
3. **Apply different slide transition and animation effects on the slides.**
4. **Save the presentation as Number System' in the main folder 'Lab Activity' and run it.**

Vidyasagar School, Indore
Summer Assignment -2024-25
Class and Section: VIII

Subject	Assignments
ENGLISH	Q1.Most of us love animals. Write a descriptive paragraph on ---Animals are Best Friends. Write two incidents to explain how reliable animals can be for humans. Q2.You after come across advertisements on hoardings, in magazines, newspapers etc. Present a favourite advertisement of yours.Make sure to include everything of the original. Q3.Create another advertisement for the same product, Organization or business with few changes.Both the advertisements should be shown shown clearly. •
HINDI	1. भारतीय संस्कृति में वृक्षों(नीम ,पीपल , बरगद ,आँवला) आदि में से किसी एक वृक्ष का महत्व सचित्र चार्ट बनाकर लिखिए। (शब्द सीमा- लगभग 100 शब्द) 2. भारत के नक्शे का निर्माण कर विभिन्न क्षेत्रों में बोली जाने वाली बोलियाँ अंकित करें तथा मध्य प्रदेश की किन्हीं दो बोलियों की जानकारी लिखिए।(शब्द सीमा - लगभग 100 शब्द)
SANSKRIT	Q1. गणेश, विष्णु तथा दुर्गा जी के श्लोक का सचित्र चार्ट बनाइए। Q2. 1 से 12 तक घटिका निर्माण कर, संस्कृत में समय लिखकर सचित्र चार्ट बनाइए।
MATHEMATICS	Solve the following equations. 1. $\frac{8x-3}{3x} = 2$ 2. $\frac{9x}{7-6x} = 15$ 3. $\frac{z}{z+15} = \frac{4}{9}$ 4. $\frac{3y+4}{2-6y} = \frac{-2}{5}$ 5. $\frac{7y+4}{y+2} = \frac{-4}{3}$ 6. Subtract the sum of $\frac{-5}{8}$ and $\frac{7}{10}$ from the sum of $\frac{3}{-5}$ and $\frac{8}{15}$. 7.Find the ten rational number between $\frac{2}{3}$ and $\frac{2}{5}$. 8.Write the additive inverse [($\frac{6}{5} + \frac{2}{3}$) x ($\frac{-3}{4}$)] 9.Write the multiplicative inverse of the following : (a) $\frac{-16}{23}$ (b) -13 (c) $\frac{3}{11}$ x $\frac{-6}{5}$

10. By what number should we multiply $\frac{-12}{13}$ to get $\frac{4}{39}$?

11. Simplify $\frac{-4}{5} \times \frac{5}{7} \times (\frac{-8}{9}) + \frac{8}{9} \times \frac{4}{7}$.

12. Rational number are closed under **addition, subtraction, multiplication** and **division.** Show this statement by taking example.

TERM – I
MATHS LAB ACTIVITY
(pdf page no. 111 to 119)

1.To fold a paper 8 times in any way. Unfold and locate various convex and concave polygons.

2.To verify by paper cutting and pasting, that the sum of interior angles of a quadrilateral is 360^0.

3.To verify by paper cutting and pasting, that the sum of the exterior angles drawn in order, of any polygon is 360^0.

4.To make the following shapes by paper folding and cutting. (a) A kite

(b) A rhombus

5.To verify that

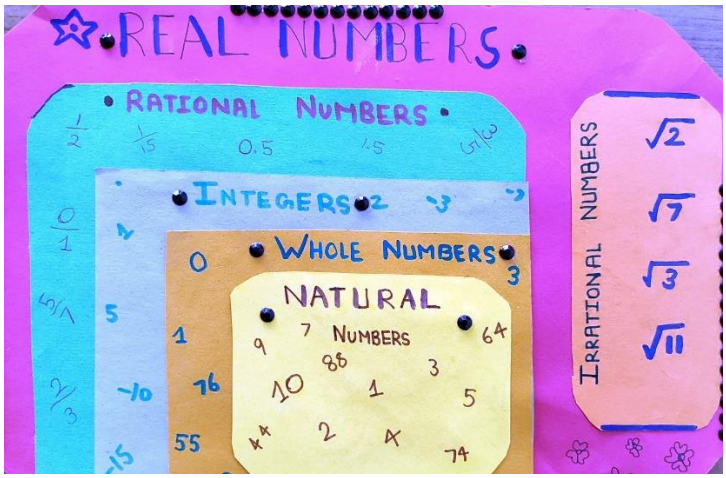
(a) the diagonals of a rectangle are equal.

(b) the diagonals of a square are equal.

(c) the diagonals of a rhombus or a parallelogram are not equal.

ART INTEGRATED ACTIVITY

To show classification of Real numbers according as attach figure.



SCIENCE	"Knowing where your food comes from can change your life." Visit a shop which deals with weedicides and pesticides. Find out the names of weedicides and pesticides sold by the shopkeeper. Enquire about the weeds and pest against which they are effective. Get the answers and keep a record of these data in your file.
SOCIAL SCIENCE	Make a report on sustainable development including the following points. 1. What is sustainable development? 2. What is its importance and why do we need it? 3. Mention the steps taken by Indian government to achieve its goals 4. Draw or paste a picture to show conservation of natural resources
ARTIFICIAL INTELLIGENCE	**Make a presentation on Computer Network**. Follow these instructions: 1. Make a folder 'Lab Activity' in any drive. 2. Make a presentation consists of five slides which will include Introduction slide, Network Types, Network Topology, Communication Channels and Protocols. 3. Apply different slide transition and animation effects on the slides. 4. Save the presentation as 'Computer Network' in the main folder 'Lab Activity' and run it.

Vidyasagar School, Indore
Summer Assignment -2024-25
Class:- IX

English

Q.1Suppose your decision to go to a picnic has proved wrong and you want to change your decision, but you can't. Write a diary entry, expressing your regret and helplessness.
Q.2Collect the opinions of your grandparents, parents and college going siblings on the use of "Digital Services in their daily life" and write the paragraph in about 100 to 120 words.

Hindi

1. यात्रा वृतांत

आपने भी किसी स्थान की यात्रा अवश्य की होगी या ग्रीष्मावकाश में यात्रा करेंगे। यात्रा के दौरान हुए अनुभवों को सचित्र प्रस्तुत करें।

2. **संकेत बिंदुओं पर आधारित अनुच्छेद लेखन

दो बैलों की कथा पाठ के आधार पर 10 देहाती शब्दों का चयन कर लगभग 100 शब्दों का एक अनुच्छेद लिखिए।

Maths

Represent $\sqrt{6.7}$ and $\sqrt{3.4}$ on number line.

Locate $\sqrt{13}$, $\sqrt{26}$ on number line.

Rationalise the denominator:

(i) $\frac{1}{\sqrt{3}+\sqrt{2}}$ (ii) $\frac{10}{\sqrt{7}-\sqrt{5}}$

If $\frac{7+4\sqrt{3}}{7-4\sqrt{3}}$ = a + b$\sqrt{3}$, find the values of a and b.

If x = 2 − $\sqrt{3}$, find $\left(\sqrt{x} + \frac{1}{\sqrt{x}}\right), \left(x^2 + \frac{1}{x^2}\right)$.

The value of x, if $\left(\frac{6}{5}\right)^x \times \left(\frac{5}{6}\right)^{2x} = \frac{125}{216}$

For what value of p the point (p,-3) lies on the line x+3y=11?

A point lies on Y axis at a distance of 2 units from the X axis. Write its coordinates.

In which Quadrant or on which axis do each of the points (-4, 5), (-3, -2), (-1, 0), (1,-2), (0, -4.5) and (-3, -5) lie?

). If the point (2k-3, k+2) lies on the graph of the equation 2x+3y+15=0, find the value of k.

. Three chairs and two tables cast Rs1850. Write a linear equation in two variables.

. Out of two numbers, one number is greater than thrice the other number by 2. Write a linear equation in two variables.

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TERM- I
MATHS PRACTICAL ACTIVITIES

Write these activities in your Maths Lab copy.

To divide a line segment of length 14 cm in 9 equal parts using parallel line board.

To represent square root spiral upto $\sqrt{8}$.

To verify that opposite sides of a parallelogram are equal by cutting and pasting.

To verify that diagonals of a parallelogram bisect each other by paper cutting and pasting.

To obtain mirror image of a plane figure in the x-axis and y-axis using graph paper.

To verify by demonstration that $(a + b)^3 = a^3 + b^3 + 3ab(a + b)$.

To show factorization by geometrical representation of the following:

(i) $x^2 + 5x + 6$ (ii) $x^2 - 5x + 6$.

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MULTIPL ASSSSMENT

Represent Irrational number up to $\sqrt{15}$ on Number line and shade it with your own creativity as per given example figure.

Science &Technology

CHAPTER : MATTER IN OUR SURROUNDINGS

Perform the following activities and write in your class work note book. Also draw well labeled diagrams.

ACTIVITY 1. To show the rate of diffusion depends on nature ofsubstance

Principle and Theory: The rate of diffusion is more between two gases than between two liquids and between two solids. Diffusion is more when interparticle forces of attractions are less. When a liquid is more viscous the rate of diffusion is less.

Materials Required: Beakers, Water, Ink and Honey

Procedure:

- Take two 500 ml beakers and take 300 ml of water in it.
- Add a drop of ink in one beaker and a drop of honey in the other.
- Wait for a half an hour without disturbing the beaker.
- Find in which beaker diffusion has taken place to greater extent

Result: The more viscous liquid honey has less rate of diffusion

ACTIVITY 2. To show the rate of diffusion depends on Temperature

Principle and Theory: The rate of diffusion is more when temperature is more. Temperature decides the kinetic energy of particles of matter. As inter particles force of attractions weakens on increasing temperature diffusion will be more

Materials Required: Beakers, Water,1gram of Potassium permanganate. Thermometers

Procedure:

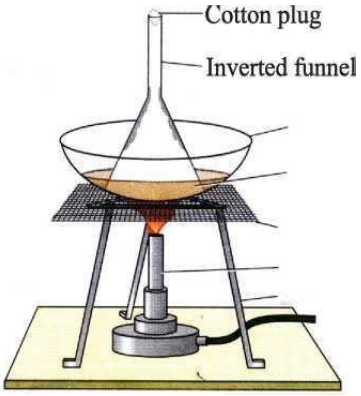
- Take two 500 mL beakers and take 300 ml of water in it.
- Heat the water in one of the beakers to 50^0C
- Add a drop of ink in both the beakers simultaneously
- Wait for 5 minutes without disturbing the beaker.
- Find in which beaker diffusion has taken place to greater extent

Result: The water at 50^0C is found to be showing more rate of diffusion than the water at room temperature

ACTIVITY 3. To show the sublimation of Naphthalene

Principle and Theory: The conversion of solid in to gas without undergoing liquid state and vice versa is sublimation. Naphthalene undergoes sublimation

Materials Required: China dish. Funnel, 10 grams of Naphthalene, ripod stand, Wire gauze, cotton.



Procedure:

- Make the arrangements as shown in the diagram.
- Heat the Naphthalene kept in the china dish

- After five minutes stop heating and keep it for cooling
- Wait for 5 minutes without disturbing the beaker.
- The converted gas of naphthalene condense on thewalls of inverted funnel

Result: Naphthalene undergoes sublimation

PHYSICS- Chapter- Motion

Perform the following activities and write in your class work note book. Also draw well labeled diagrams/ Graphs.

The times of arrival and departure of a train at three stations A, B, and C and the distance of stations B and C from station A are given in the table.

Plot and interpret the distance-time graph for the train assuming that its motion between any two stations is uniform.

Distance of stations B and C from A and times of arrival and departure of the train

Station	Distance from A(km)	Time of arrival(hours)	Time of departure
A	0	08:00	08:15
B	120	11:30	11:30
C	180	13:00	13:15

Feroz and his sister sania go to school on their bicycles. Both of them start at the same time from their home but take different times to reach the school. Although they follow the same route. Table shows the distance travelled by them in different times.

Distance covered by Feroz and sania at different times on their bicycles

Time	Distance travelled by Feroz(km)	Distance travelled by sania(km)
8:00	0	0
8:05	1.0	0.8
8:10	1.9	1.6
8:15	2.8	2.3
8:20	3.6	3.0
8:25	-	3.6

Plot the distance – time graph for their motions on the same scale and interpret.

Social Science

Make a project of disaster management taking help of disaster management book on following points-

1. Introduction
2. Detail case study of man made disaster, complete information, occurrence station causes
3. Relief and rehabilitation- survival skills, role of government, role of community
4. Paste the pictures, prepare diagrams, charts, tabular presentation of data
5. Conclusion
    - Use A4 size pages
    - Handwritten project, without plastic folder

Artificial Intelligence

Take a trip of your city and list down the different sources of environmental pollution. Prepare a power point presentation under the following headings:

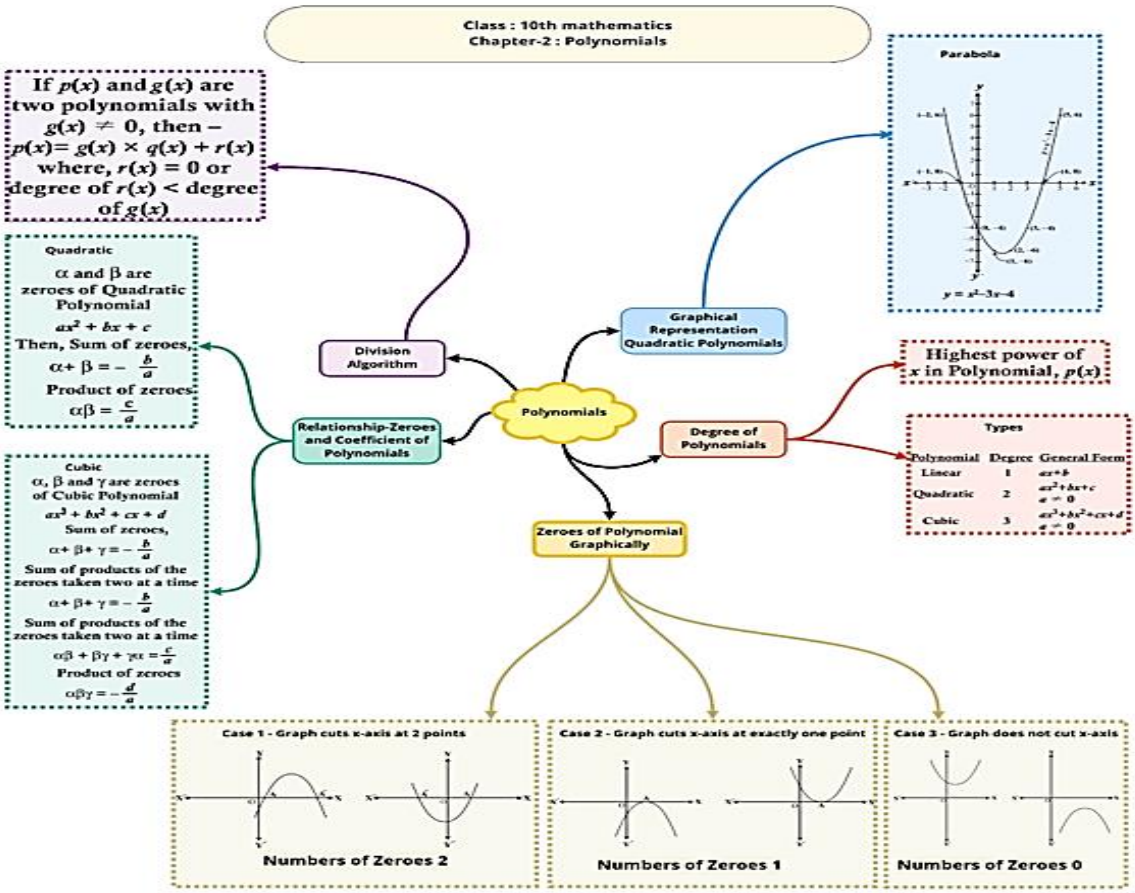
● Types of Pollution (Air, Land, Water, etc.)

- **Sources**
- **Effects of the pollution**
- **Suggestions for controlling pollution**

Vidyasagar School, Indore
Summer Assignment -2024-25
Class:- X

	Subject:- English
Q.1	Read the following extract and answer the questions that follow: Has given my heart A change of mood And saved some part Of a day I had rued (a) Complete the sentence appropriately The continuation of a sentence without the end of a line, couplet or stanza is called_____. (b) The poet has used a poetic device in the given lines. Identify the poetic device. (c) What is the message conveyed by the poet through the given lines in the extract?
Q.2	Our mental condition depends on our surroundings. Explain with reference to the poem The Dust of snow in about 125-150 words.
Q.3	Write a character sketch of: * Lencho * Postmaster * James Herriot * Mrs. Pumphrey
	Subject:- Hindi
Q.1	**नेताजी सुभाष चंद्र बोस के व्यक्तित्व और कृतित्व पर एक प्रोजेक्ट बनाइए।** **(शब्द सीमा- लगभग 200 शब्द)**
Q.2	**विक्रम संवत कैलेंडर के अनुसार चैत्र से लेकर फागुन तक मुख्य त्योहारों की सूची चित्र सहित बनाइए।**
	Subject:- Maths
Q.1	Find HCF and LCM of 30, 72 and 432 by prime factorization method.
Q.2	Find the largest number which when divides 969 and 2059, the remainder obtained are 9 and 11 respectively.
Q.3	Prove that $\sqrt{3}$ is an irrational number.
Q.4	Prove that $\sqrt[3]{6}$ is an irrational number
Q.5	Check whether 6^n can end with the digit 0 for any natural number n.
Q.6	Find the least number which when divided by 12, leaves remainder of 7, when divided

	by 15 leave remainder of 10 and when divide by 16, leave remainder of 11.
Q.7	Two numbers are in the ratio 15 :11. If their HCF is 13, find the numbers.
Q.8	Find the largest possible positive integer that divides 125, 162 and 259 leaving remainder 5, 6 and 7 respectively.
Q.9	Find the largest possible positive integer that divides 125, 162 and 259 leaving remainder 5, 6 and 7 respectively.
Q.10	If α and β are two zeroes of the quadratic polynomial $p(x) = 2x^2 – 3x + 7$, then evaluate (i) $\frac{1}{\alpha} + \frac{1}{\beta}$ (ii) $\alpha^2 + \beta^2$ (iii) $\alpha^3 + \beta^3$.
Q.11	Find the quadratic polynomial with zeroes $\sqrt{2}$ and $\frac{1}{3}$.
Q.12	If the sum of squares of zeroes of a quadratic polynomial $p(x) = x^2 – 8x + k$ is 40, find the value of k.
	MATHS LAB ACTIVITIES
	TERM:1
	Write the following Math's Lab Activities in your Math's practical file with proper diagram, cutting and pasting. 1. To check the consistency of a pair of linear equations in two variables graphically when (i) lines are intersecting, (ii) lines are coincident. (iii) lines are parallel. 2. To verify that sum of first n odd natural numbers is n^2. 3. To verify that sum of first n natural numbers is $\frac{n(n+1)}{2}$. 4. To verify that sum of first n terms in an A.P is $\frac{n}{2}$[2a+(n-1)d] ,where a is the first term and d is the common difference of the A.P. 5. To state and verify PYTHAGORAS THEOREM. 6. To show that the medians of a triangle are concurrent. **ART INTEGRATED ACTIVITY**



** Perform this art-integrated activity.

Subject- Science and Technology (086)

CHAPTER: MATTER IN OUR SURROUNDINGS

Perform the following activities and write (any five) in your class work note book. Also draw well labelled diagrams.

Activity 1

Brief Procedure:

Activity1. Take and burn Magnesium ribbon in a china dish and see what happens.

Observation:

Magnesium ribbon burns spontaneously, and white ash deposits on the china dish.

Explanation:

Magnesium is a highly reactive metal. It reacts spontaneously with oxygen present in the atmosphere to form white ash of Magnesium oxide with the liberation of energy.

$2Mg(s) + O_2(g) \longrightarrow 2MgO(s)$

Caution:

Magnesium can burn spontaneously like a cracker. Keep it away from the body during the experiment.

On the basis of this activity answer the following questions-

Q.1 Why should a magnesium ribbon be cleaned before it is burnt in air?

Q. 2	Write the balanced chemical reaction for the process.
Q.3	What type of light is produced during the burning of this ribbon?
Q.4	What will happen when we dissolve this ash in to water? Write equation.
Q.5	What change you will observe when we put few drops of this on red litmus paper?
	Activity 2 **Brief procedure:** To mix an aqueous solution of lead nitrate with potassium iodide to check what happens. **Observation:** A yellow colour precipitate appears at the bottom. **Explanation:** Lead nitrate and potassium iodide; both are colourless. They react with each other to form a yellow precipitate of lead iodide. Lead iodide settles down at the bottom of the tube. **When you have mixed the solutions of lead (II) nitrate and potassium iodide,** **(i) What was the colour of the precipitate formed and can you name the precipitate?** **(ii) Write the balanced chemical equation for this reaction.** **(iii) What is the difference between displacement and double displacement reactions?** **Write equations for these reactions**
	Activity 3 **Objective: T**o put zinc granules in the beaker containing acid either hydrochloric acid or sulphuric acid and ask for what we observe. **Observation:** Air Bubbles comes out from the granules, and Conical flask becomes warm. **Inference:** Zinc granules react with hydrochloric acid or sulfuric acid and Forms hydrogen gas. $Zn(s)+ 2HCl(aq) \rightarrow ZnCl_2(aq)+H_2\uparrow+heat$ $Zn(s)+2H_2SO_4(aq) \rightarrow ZnSO_4(aq)+2H_2\uparrow+heat$ **Caution:** Acids are corrosive and harmful for skin. Avoid touching them with bare skin. Answer the following questions on the basis of observations made during the demonstration.
Q.1	What did you observe happening at the bottom of the test tube in the activity performed?
Q.2	Did you feel any change in the temperature on touching the bottom of the test tube?
Q.3	Suggest whether the heat is being released or absorbed during the process of the activity?
Q.4	What observations tell us that addition of dilute acid to zinc granules leads to a chemical change?
Q.5	Give example of one physical and one chemical change from your daily life.

Activity 4

Brief Procedure: This activity asks to put some quick lime (CaO) in to the water and observe the reaction.

Observation: Beaker feel hot after adding water

What happens chemically when quick lime is added to water filled in a bucket?

Explanation: Quick lime reacts with water to form slaked lime. The process is exothermic and releases heat.

$CaO(s)+H_20(l) \rightarrow Ca(OH)_2(aq)+$ Heat

Application in white washing: Slaked lime reacts with the carbon dioxide present in the air. It forms Calcium carbonate which is a shiny compound. For Example, Marble used in the home is also the same. So we use slaked lime as white wash paint in home walls. After two to three days slaked lime convert to carbonate which gives the wall a shiny surface.

$Ca(OH)_2(aq) + CO_2(g) \longrightarrow CaCO_3(s) + H_20(l)$

Activity 5

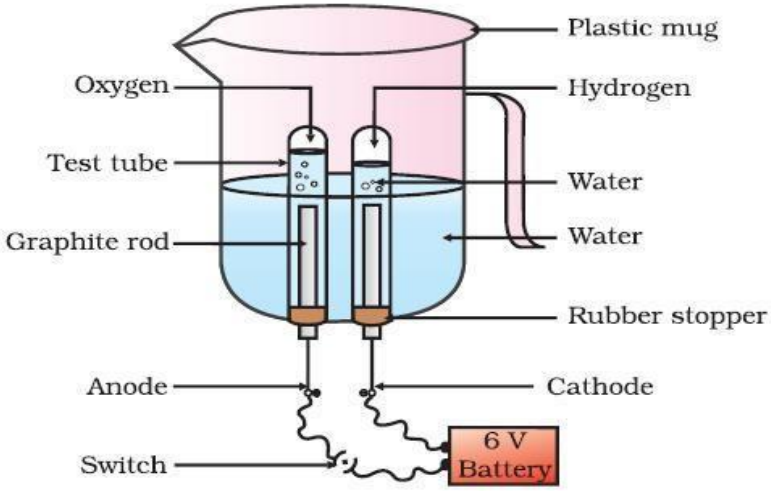
Procedure: Activity 5 To heat ferrous sulphate crystals (aka Green vitriol) in a test tube and see what happens.

Observation: The Green colour of ferrous sulphate changes to brown and peculiar sulphur smell comes out from the test tube.

Inference: Heat in ferrous sulphate on test tube leads to decomposition of ferrous sulphate in to a ferric oxide which is brown. It also liberates sulphur dioxide gas which has a foul smell.

$$2FeSO_4(S) \xrightarrow{\text{Heating}} Fe_2O_3(s)+SO_2(g)+SO_3(g)$$

Procedure: The activity asks to electrolyse water using a 6-volt battery and check the volume of gases liberated at anode and cathode.The activity also asks to bring the gas at the flame and see what happens



In the electrolysis of water,

a) Name the gas collected at the anode and cathode
b) Why is the volume of gas collected at one electrode double than the other?
c) What would happen if dilute H_2SO_4 is not added to water?

Activity 6

Procedure: To heat ferrous sulphate crystals (aka Green vitriol) in a test tube and see what happens.

Observation: The Green colour of ferrous sulphate changes to brown and
Peculiar sulphur smell comes out from the test tube.
Ferrous sulphate decomposes into ferric oxide

Inference: Heating ferrous sulphate on test tube leads to decomposition of ferrous sulphate into a ferric oxide which is brown. It also liberates sulphur dioxide gas which has a foul smell.

$2FeSO_4(S) \xrightarrow{\text{Heating}} Fe_2O_3(s)+SO_2(g)+SO_3(g)$

2g of ferrous sulphate crystals are heated in a dry boiling tube.

(i) List any two observations.
(ii) Name the type of chemical reaction taking place.
(iii) Write the chemical equation for the reaction.

Activity 7

Procedure: The question asks to heat an aqueous solution of lead nitrate into a test tube and see what happens.

Observation: A **yellow precipitate** of lead oxide form withte evolution of brown nitrogen dioxide gas which has an irritating smell.

Inference: Lead nitrate decomposes to lead oxide which is yellow. Nitrogen dioxide gas is liberated which has a brown colour and irritating smell.

$2Pb(NO_3)_2(s) \longrightarrow 2PbO(s)+4NO_2(g)+O_2(g)$

Lead nitrate Heat Leadoxide Nitrogenoxide Oxygen

(a) Write two observations when lead nitrate is heated in a test tube.

(b) Name the type of reaction.

Write the balanced chemical equation to represent the above reaction.

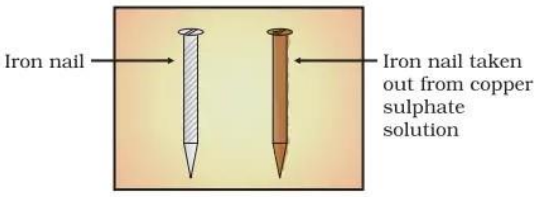
Activity 8

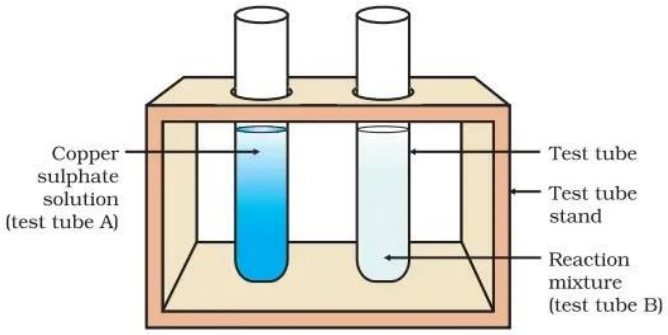
The main objective of this activity 1.9 class 10 science is to enable students to observeandunderstandthechemicalreactionthattakesplacebetweenironnails and copper sulphate solution.

MaterialsRequired:

1. Three clean iron nails
2. Sand paper
3. Two test tubes marked (A) and (B)
4. 20 Ml copper sulphate solution
5. A thread

Procedure:





Step1: Preparation of Iron Nails

Start by cleaning the three iron nails with sand paper to remove any rust or impurities from their surfaces.

Step2: Preparation of Test Tubes

Fill both test tubes (A) and (B) with 10 mL of copper sulphate solution each.

Step3: Immersion of Iron Nails in Test Tube B

Tie two iron nails together with thread and place them in test tube B, making sure they are completely submerged in the copper sulphate solution. Leave them there for about 20 minutes.

Step4: Observation and Comparison

Remove the iron nails from test tube B after 20 minutes and compare the intensity of the blue colour of the copper sulphate solution in both test tubes (A) and (B). Compare the colours of the iron nails that were immersed in the solution to those that were set aside.

Analysis and Conclusion:

	When compared to the solution in test tube A, you will note that the blue tint of the copper sulphate solution in test tube B has become lighter. In addition, the iron nails dipped in the solution have turned reddish, indicating copper deposition. This colour change indicates that a chemical reaction occurred between the iron nails and the copper sulphate solution. activity-based question
Q.1	What type of chemical reaction is demonstrated by the interaction between iron nails and copper sulphate solution?
Q.2	Why it is important to clean the iron nails with sand paper before conducting the experiment?
Q.3	What is the significance of comparing the colour of the copper sulphate solutions in test tubes A and B after the experiment?
Q.4	After ten minutes of keeping the set up as shown in the figure, the colour of the iron nail changes, what does this indicate?
Q.5	Name the type of chemical reaction that takes place between copper sulphate and iron nail.
Q.6	Which of the two metals involved in the given process is more reactive?
Q.7	What change do you expect in the reaction mixture if a copper wire is kept immersed in an iron sulphate solution?
Q.8	Write a balanced chemical equation for the reaction, between copper sulphate and iron nail.
	Physics-
Q.1	Plot on graph paper for six different position of object in case of concave mirror (all six cases), to show the type, position and nature of image formed.
Q.2	An object is placed 10 cm from a concave mirror of curvature 15 cm. Calculate the position, nature and magnification of the image formed
	Subject:- SOCIAL SCIENCE
	TOPIC SUSTAINABLE DEVELOPMENT (given by CBSE) Students will conduct a survey in their surroundings to know about the status of water resources/ any other resources on following points 1. Introduction 2. Case Study – detail case study for water sources, it's importance, water scarcity, reasons of water pollution and conservation methods. 3. Survey and data collection - questionnaire/ interview 4. Data Presentation 5. Role of government and Indore Municipal corporation for conservation of water

	6. Paste the pictures 7. Solutions and suggestions for water conservation 8. Conclusion • Use A4 size pages • Hand written project
	ARTIFICIAL INTELLIGENCE
Q-1	*Follow the link http://in.one.un.org/page/sustainable-development-goals/ and find out about what India is doing to achieve each of the 17 sustainable goals as part of the United Nations 2030 Agenda. Make a PowerPoint presentation on the same.(Create 10-15 slides)

Vidyasagar School,Indore
Summer Assignment -2024-25
Class:- XII – A & B

English Core Assignment

Answer the following questions in 125 to 150 words:
1. Draw a character sketch of M Hamel.
2. What did Hamel teach his students in the last lesson?
3. What happened when the church clock struck 12? Discuss

Prepare English Project as prescribed by the CBSE guidelines already discussed in class
Submission date June 15 2024.
Spiral binding compulsory

TOPICS FOR PHYSICS PROJECT work

1. GAUSS THEOREM AND ITS APPLICATIONS LOVE MODI, PRISHA JAIN
2. CARGING AND DISCHARGING OF CAPACITORSHARSHIT VERMA, PRAGYA JAIN
3. COMBINATION OF CAPACITORS RAGHAV SHIVHARE,
4. MOVING COIL GALVANOMETER SHRESTHI ,
5. AC GENERATOR YATHARTH TRIVEDI
6. TRANSFORMER(STEP UP AND STEP DOWN) SUHANI
7. ELECTROMAGNETIC INDUCTION SUMIT , UNNATI SHAH
8. INTERFERENCE OF LIGHT VINAYAK
9. DIFFRECTION OF LIGHT TANISH,,
10. RECTIFIER(HALF AND FULL WAVE) DHAIRYA , AMAN
11. VARIOUS FACTORS ON WHICH THE INTERNAL RESISTANCE /EMF OF A CELL DEPENDS., ANUSHKA , UNNATI , ANSHUL
12. TO FIND THE REFRACTIVE INDECES OF WATER AND OIL USING A PLANE MIRROR ,AN EQUICONVEX LENS AND AN ADJUSTABLE OBJECT NEEDLE.AASHI VAIDYA , RAJ BHATIA
13. TO INVESTIGATE THE DEPENDENCE OF THEANGLE OF DEVIATION ON THE ANGLE OF INCIDENCE USING A HOLLOW PRISM FILLED ONE BY ONE , WITH DIFFERENT TRANSPARENT FLUIDS. BHARGABI , GEETIKA , RISHI PURANIK
14. SEMICONDUCTORS HARSHIT RATHORE , DRON
15. STUDY OF HERTZ AND LENARD'S OBSERVATIONS ABOUT PHOTO ELECTRIC CURRENT. HARSHITA, KHUSHI, ABHILASHA
16. NUCLEAR FISSION AND FUSION. RANDEEP
17. OPTICAL FIBERS SHUBH , PRAKHAR
18. OPTICAL INSTRUMENTS , MICROSCOPES AND TELESCOPES PRACHITI , AADITYA
19. AMPERE'S LAW AND ITS APPLICATIONSKUBERJI

worksheet

- 1.A charge 'q' is placed at the centre of a cube of side l. What is the electric flux passing through each face of the cube?
- 2.Two equal balls with equal positive charge 'q' coulombs are suspended by two insulating strings of equal length. What would be the effect on the force when a plastic sheet is inserted between the two?
- 3.Two point charges q1 = 10 × 10−8 C and q2 = −2 × 10−8 C are separated by a distance of 60 cm in air. (i) Find at what distance from the 1st charge, q1, would the electric potential be zero. (ii) Also calculate the electrostatic potential energy of the system.

4. A spherical Gaussian surface encloses a charge of 8.85 × 10-10C. (i) Calculate the electric flux passing through the surface. (ii) How would the flux change if the radius of the Gaussian surface is doubled and why?

5. (i) Can two equi-potential surfaces intersect each other? Give reasons. (ii) Two charges −q and +q are located at points A (0, 0, −a) and B (0, 0, +a) respectively. How much work is done in moving a test charge from point P (7, 0, 0) to Q (−3, 0, 0)?

CHEMISTRY

TOPIC-COORDINATION COMPOUNDS

Answer the following Questions:

Q-1) A coordination compound CrCl, $4H_2O$ precipitates silver chloride when treated with silver nitrate. The molar conductance of its solution corresponds to a total of two ions. Write the structural formula of the compound and name it.

Q-2) A complex of the type $[M(AA)_2X_2]^{n+}$ is known to be optically active. What does this indicate about the structure of the complex? Give one example of such a complex.

Q-3) On the basis of crystal field theory explains why Co (III) forms a paramagnetic octahedral complex with weak field ligands whereas it forms a diamagnetic octahedral complex with strong field ligands.

Q-4)Give the electronic configuration of the following complexes on the basis of Crystal Field Splitting theory.

$[CoF_6]^{3-}$, $[Fe(CN)_6]^{4-}$ and $[Cu(NH_3)_6]^{2+}$.

Q-5) $CuSO_4.5H_2O$ is blue in colour while $CuSO_4$ is colourless. Why?

Q-6) Using valence bond theory, explain the following in relation to the complexes given below:

$[Mn(CN)_6]^{3-}$, $[Co(NH_3)_6]^{3+}$, $[Cr(H_2O)_6]^{3+}$, $[FeCl_6]^{4-}$

(i) Type of hybridisation.

(ii) Inner or outer orbital complex.

(iii) Magnetic behaviour.

(iv) Spin only magnetic moment value.

Q-7) Arrange the following complex ions in increasing order of crystal field splitting energy (Δ_o) : $[Cr(Cl)_6]^{3-}$, $[Cr(CN)_6]^{3-}$, $[Cr(NH_3)_6]^{3+}$.

Q-8) Why are low spin tetrahedral complexes not formed?

Q-9) Magnetic moment of $[MnCl_4]^{2-}$ is 5.92 BM. Explain why

Q-10) A complex of the type $[M(AA)_2X_2]^{n+}$ is known to be optically active. What does this indicate about the structure of the complex? Give one example of such a complex.

BIOLOGY

(I) To complete practical file .

Q.1 Study and observe and comment on the following (Spotting):

(i)T.S. of mammalian testis

(ii) T.S. of mammalian ovary through permanent slides

(iii)T.S. of blastula through permanent slides (Mammalian)

(iv) Common disease causing organisms like -Ascaris,

(v) Entamoeba,

(vi)Plasmodium,

(vii)Controlled pollination - emasculation, tagging and bagging

Models specimen showing symbolic association in

(viii) root modules of leguminous plants,

(ix) Cuscuta on host,

(x) lichens.
(xi) Flash cards models showing examples of homologous and analogous organs
Flowers adapted to pollination by different agencies
(xii) wind pollination
(xiii) Insects pollination
Prepared pedigree charts of any one of the genetic traits such as
(Xiv) rolling of tongue,
(xv)blood groups,
(xvi)ear lobes,
(xvii) widow's peak
(xviii) colour blindness.
Q.2 Slide Preparation-(i) Prepare temporary mount slide of onion root tip to show various stages of mitosis , draw well labeled diagram and write experiment.
(ii) Prepare a temporary mount to observe pollen germination. Draw well labeled diagram and write experiment.
Q.3 Major Experiment- Isolate DNA from available plant material such as spinach, green pea seeds, papaya, etc. Draw well labeled diagram and write experiment.
Q.4 Minor Experiment- (i) Study the plant population density by quadrat method.
(ii). Study the plant population frequency by quadrat method

(II) Project work – Projects for annual board practical exam. Complete the project work on allotted topic individually.
(III) Writing work (assignment) Complete all NCERT questions of Chapter (i) Sexual Reproduction in Flowering Plants, (ii) Human Reproduction (iii) Reproductive Health (iv) Principles of Inheritance and Variation : Heredity and variation.

NCC

Q-1 What is fire ? Discuss the modes of spread of fire ?
Q-2 What precautions should be taken in schools to educate students about floods?
Q-3 Which life skills are enhanced by working as responsible volunteers during any calamity?
Q-4 What will be your effective strategy to make a group of NCC cadets work in an efficient way, during the call of emergency?
Q-5 Fire can be extinguished if any one or more of the three main constituents" i.e. Oxygen, heat and combustible material are removed from the scene of fire."
Q-6 Explain the statement in the light of ways of extinguishing the fire.
Q-7 Write the seven commands of the Indian Army, 7 commands of the Indian Air force and three commands of the Indian Navy with their headquarters.
Q-8 Write different branches of the Indian Air force.
Q-9 Complete your Investigatory Project as chosen by you.

Hindi

Q-1) हिंदी भाषा और साहित्य से जुड़े विविध विषयों पर परियोजना कार्य।

Physical Education

Q-1) What do you mean by Sports Management explain its five parts (Phases) .
Q-2) Explain various functions of sports management.
Q-3) Explain any five main sports committees and their Responsibilities (pre, during, post) to organize any sports Event.
Q-4) Explain term Tournament and Fixture .Write various types of tournament?
Q-5) What do you mean by Knock-out tournament?.Explain its Merits and Demerits.
Q-6) Define League or Round robin tournaments and its types. Explain its Advantages and Demerits.
Q-7) Draw a knock out and League Fixture of 19 teams and find out no. of Byes, no.of teams in upper half and lower half.
Q-8) What do you mean by Intramural .Explain its objectives, principles and importance?
Note: Dear students please write answers of above questions in your PE notebook.
Q-9) PROJECT WORK:-Write History, rules & regulations, terminology, Equipments, Personalities, skills of your opted game. Draw a labeled diagram of your opted game play field area.
Note: Dear students please write above project work in your PE Practical file.

Maths

1. If $y = \sqrt{\log\{\sin(x^2 - 1)\}}$ find $\frac{dy}{dx}$

2. If $y = \tan^{-1}\left(\frac{x}{1+6x^2}\right)$, find $\frac{dy}{dx}$

3. Differentiate w.r.t. $\cot^{-1}\left(\frac{\sqrt{1+\sin x}+\sqrt{1-\sin x}}{\sqrt{1+\sin x}-\sqrt{1-\sin x}}\right)$.

4. If $\sqrt{1-x^2} + \sqrt{1-y^2} = a(x-y)$ prove that $\frac{dy}{dx} = \sqrt{\frac{1-y^2}{1-x^2}}$

5. If $y = \tan^{-1}\left(\frac{2^{x+1}}{1-4^x}\right)$, find $\frac{dy}{dx}$.

6. If $xy \log(x+y) = 1$, prove that $\frac{dy}{dx} = -\frac{y(x^2y+x+y)}{x(xy^2+x+y)}$

7. Differentiate w .r .t. x : $\log \tan\left(\frac{\pi}{4} + \frac{x}{2}\right)$.

8. If $y = \cos^{-1}\left(\frac{2x-3\sqrt{1-x^2}}{\sqrt{13}}\right)$, find $\frac{dy}{dx}$

9. If $\tan^{-1}\left(\frac{x^2-y^2}{x^2+y^2}\right) = a$, Prove that $\frac{dy}{dx} = \frac{x(1-\tan a)}{y(1+\tan a)}$

10. If $\sqrt{y+x} + \sqrt{y-x} = c$, show that $\frac{dy}{dx} = \frac{y}{x} - \sqrt{\frac{y^2}{x^2} - 1}$

11. If $y = \frac{-3\sin(3X-1)}{2\sqrt{\cos(3X-1)}}$ find $\frac{dy}{dx}$

12. If $y = \frac{\sin xe^x}{-3e^{2-3x}}$ find $\frac{dy}{dx}$

13. Write all formula of Differentiation and principal value of Inverse trigonometry function.

14. Write all property of inverse trigonometry

15. Write all practical activities in your practical file (pdf of activities attached with assignment)

VOCAL MUSIC

1)परिभाषिएं: कण, गमक, तान, आलाप, खटका, मुरकी, अलंकार, ग्राम, मूचछना।

2)जीवनी: उस्ताद फ़ैयाज़ खां।

3)राग: भैरव छोटा ख़्याल

•तान, बंदिश, सरगम गीत, लक्षण गीत।

PAINTING

• Make kalamkari painting with any medium (i.e., Water, poster or acrylic) of your choice on a drawing sheet or canvas of half imperial size either horizontally or vertically.

PSYCHOLOGY

Q-1 The problem of household garbage is common in most Indian cities. The concern for a clean environment is increasing but we do not know to what extent citizens know how to dispose of the garbage that collects in their

household. Visit 4 houses in the colony and ask the heads of the household the following questions. Their answers must be written down

1) What do you do with old newspapers, magazine, tins and bottles?
2) What do you do with plastic packets and other plastic objects for example toys and containers?
3) How do you dispose of kitchen waste example vegetable and fruit peels used tea leaves or tea bags, leftover food that can't be eaten?
4) How do you dispose of other used objects that contain chemical substances example torch cells, used or damaged CD, cassettes, insecticide and pesticide containers etc.?
5) Do you put all the garbage collected in your house everyday in the same place or do you put different kinds of garbage in separate dustbins/ waste baskets?
6) What happens to the garbage that is collected from your house and neighbourhood and where is it taken?
7) What is meaning of 'recycling'?
8) What can you do personally to make your colony/ neighbourhood cleaner?

Compare the responses collected by you and write a summary addressing the attitude and awareness people show about waste management at the household level.

Q-2 Write Answers of Chapter 1 in Copy

Q-3 Read Chapter 6

Computer Science

Thoroughly study Chapter 1& 2 - Python Revision Tour I & II

● Chapter 3- Functions (Back Exercise - Programs, Solved and unsolved questions)

Vidyasagar School, Indore
Summer Assignment -2024-25
Class and Section: XII (C&D) (Commerce)

Subject	Assignments
ENGLISH	**English Core Assignment** Answer the following questions in 125 to 150 words: 1. Draw a character sketch of M Hamel. 2. What did Hamel teach his students in the last lesson? 3. What happened when the church clock struck 12? Discuss Prepare English Project as prescribed by the CBSE guidelines already discussed in class **Submission date June 15 2024.** **Spiral binding compulsory.**
Accountancy (055)	Q.1 Define partnership. Q.2 What are the maximum no. of partners that a partnership firm can have? Name the act that provides for the maximum no. of partners in a partnership firm. Q.3 State the provisions of partnership act 1932 in the absence of partnership deed. Q.4 What share of profits would a sleeping partner, who has contributed 75% of the total capital, get in the absence of the deed? Q.5 Kanha, neeraj and Asha were partners in a firm they admitted Madhav their landlord as a partner in the firm.Madhav had given a loan of Rs.1,00,000 @ 10 % p.a. interest to the firm before he became the partner. Now the accountant of the firm is emphasizing that the interest on loan should be paid 6% p.a. is he right in doing so? Give reason in support of your answer. Q.6 Differentiate between charge against profit and appropriation of profit.(any 4) Q.7 calculate interest on drawing @6% p.a for the year ended 31 st march 2023,under the following cases: 1.Pooja withdrew Rs.12,000 during the year. 2. Ansh withdrew Rs. 4,000 at the beginning of every month during the year. 3. Tanisha withdrew Rs.3,000 at the middle of every month, during the year. 4. Nitika withdrew Rs.2,000 at the end of every month during the year. 5. Ayush withdrew Rs. 4,000 at the beginning of every month for six months. 6. Aditi withdrew Rs. 5,000 at the beginning of every quarter

	during the year. 7. Nimish withdrew Rs. 4,000 at the end of every quarter during the year. Q.8 A and B are partners in a firm. For the year ended 31st March,2023, A's drawings were: 1st June 2022 1000 1st December 2022 500 1st August 2022 750 1st February 2023 500 30th Sept. 2022 1250 Interest on drawings is charged @12% p.a. calculate interest on drawings of A. Q.9 A,B and C are partners in a firm. A is entitled a commission of 10% of the net profit before charging his commission. B is entitled a commission of 10% after charging his commission is entitled a commission of 10% of the net profit after charging all commission including his commission. Net profit for the year ended 31 st march 2023, before charging any commission is Rs. 2,20,000. Calculate partners' commission. Q.10 A,B and C are partners in a firm. Their capital accounts showed the balance on 1st april,2021 as Rs. 20,000 Rs.15,000 and Rs.10,000 respectively. During the year A withdrew Rs. 400 at the beginning of the each month withdrew Rs.500 at the end of each month. C withdrew Rs.800 at the middle of the each month for six months ending 30th Sept. 2022. Interest on drawing is to be charged @ 12% p.a. Calculate interest on drawings for each partner. Choose the correct answer out of the following choices(Q.11Ram and Gopal were partners in a firm. On 1.4.2022, their capitals were Rs. 1,00,000 and Rs. 1,50,000 respectively. On 30.6.2022 they decided that their total capital (fixed) should be in their sharing ratio. Accordingly they introduced or withdrew the necessary capital. The partnership deed provided the following: 1. Interest on capital @ 12% p.a. 2. Interest on drawings @ 18% p.a. 3. The drawings of Ram and Gopal during the year were Rs.25,000 and Rs. 24,000 respectively. 4. 10% of the profit was to be kept in a reserve. Prepare profit and loss appropriation account if the amount of reserve is given Rs. 20,000.
Business Studies (054)	**Chapter 1: Nature and Significance of Management** 1. The Activities involved in managing an enterprise are common to all organizations whether economic, social or political. Which characteristic of management is highlighted by this statement?

	2. Policy formation is the function of which level of management? 3. In order to be successful an organization must change its goals according to the need of the environment. Which characteristic of management in highlighted in the statement? 4. To meet the objectives of the firm the management of Angora Ltd. Offer employment to physically challenged persons . Identity the organizational objective it is trying to achieve. 5. Management of any organization strives to attain different objectives Enumerate any two such objectives? 6. “Management is considered to be a three-tier machinery”. Why? 7. Name the process by which a manager synchronizes the activities of different departments. 8. Dheeraj is working as „Operations Manager in Tifco Ltd. Name the managerial level at which he is working. State any four functions he will perform as „Operations Manager‟ in this company. 9. Yash Ltd. is facing a lot of problems these days. It manufactures electronic goods like washing machines, microwave ovens, refrigeration and air- conditioners. The company's margins are under pressure and the profits and market marketing department blames production department for producing goods, which are not of good quality to meet customers'‟ expectations. The finance department blames both production and marketing departments for declining return on investment and bad marketing. (a). What quality of management do you think the company is lacking? Justify your answer. (b). State the importance of the concept identified in (a). 10. Govinda Ltd. is a highly reputed company. Different functions are performed by different individuals in this company, who are bound together in a hierarchy of relationships. Every individual in the hierarchy is responsible for successful completion of a particular task. Mr. Gauranga is responsible for the welfare and survival of the organization. He formulates overall organizational goals and strategies for their achievement. MR. Nityanand ensures that quality of output is maintained, wastage of materials is minimized and safety standards are maintained. Mr. Sanatan assigns necessary duties and responsibilities to the personnel and motivates them to achieve desired objectives At what levels of management are Mr. Gauranga, Mr. Nityanand and Mr. Sanatan working in Govinda Ltd.? justify your answer.
Economics (060)	**PROJECT WORK** 1. Project should be of 3500-4000 words (excluding diagrams and graphs), preferably hand written 2. It will be an independent, self-directed piece of study

	EXPECTED CHECKLIST • Introduction of topic • Identifying the causes, consequences and/or remedies • Various stakeholders and effect on each of them • Advantages and disadvantages of situations or issues identified • Short term and long term implications of economic strategies suggested in the course of research • Validity, reliability,appropriateness and relevance of data used for research work and for presentation in the project file • Citation of the material referred to,in the file in footnotes, resources section, bibliography etc.
MATHS	**SUMMER ASSIGNMENT** **CLASS XII – MATHEMATICS (041)** 1. If $y = \sqrt{\log\{\sin(x^2-1)\}}$ find $\frac{dy}{dx}$ 2. If $y = \tan^{-1}\left(\frac{x}{1+6x^2}\right)$, find $\frac{dy}{dx}$ 3. Differentiate w.r.t. $\cot^{-1}\left(\frac{\sqrt{1+\sin x}+\sqrt{1-\sin x}}{\sqrt{1+\sin x}-\sqrt{1-\sin x}}\right)$. 4. If $\sqrt{1-x^2}+\sqrt{1-y^2} = a(x-y)$ prove that $\frac{dy}{dx} = \sqrt{\frac{1-y^2}{1-x^2}}$ 5. If $y = \tan^{-1}\left(\frac{2^{x+1}}{1-4^x}\right)$, find $\frac{dy}{dx}$. 6. If $xy\log(x+y) = 1$, prove that $\frac{dy}{dx} = -\frac{y(x^2y+x+y)}{x(xy^2+x+y)}$ 7. Differentiate w.r.t. x : $\log\tan\left(\frac{\pi}{4}+\frac{x}{2}\right)$. 8. If $y = \cos^{-1}\left(\frac{2x-3\sqrt{1-x^2}}{\sqrt{13}}\right)$, find $\frac{dy}{dx}$ 9.If $\tan^{-1}\left(\frac{x^2-y^2}{x^2+y^2}\right) = a$, Prove that $\frac{dy}{dx} = \frac{x(1-\tan a)}{y(1+\tan a)}$ 10. If $\sqrt{y+x}+\sqrt{y-x} = c$, show that $\frac{dy}{dx} = \frac{y}{x} - \sqrt{\frac{y^2}{x^2}-1}$ 11. If $y = \frac{-3\sin(3X-1)}{2\sqrt{\cos(3X-1)}}$ find $\frac{dy}{dx}$ 12. If $y = \frac{\sin xe^x}{-3e^{2-3x}}$ find $\frac{dy}{dx}$ 13. Write all formula of Differentiation and principal value of Inverse trigonometry function. 14. Write all property of inverse trigonometry 15. Write all practical activities in your practical file (pdf of activities attached with assignment)

Applied Mathematics (241)

Q.1 Find the last two digits of the product 4895×6789.

Q.2 Two vessels P and Q contain milk and water in the ratio 5:3 and 13: 3 respectively.
In what ratio mixtures from two vessels should be mixed to get a new mixture containing milk and water in the ratio 3 : 1 respectively?

Q.3 Two pipes can fill the tank in 20minutes and 24 minutes respectively and a waste pipe can empty3 gallons of water per minute If all the three pipes working together can fill the tank in 15 minutes, find the capacity of the tank?

Q.4 Find all pairs of consecutive positive integers, both of which are larger than 5, such that their sum is less than 23.

Q.5 A boat goes 30 km downstream and comes back to the starting point in 4 hours and 30 minutes. If the speed of the boat in still water is 15 km/h, find the speed of the stream.

Q.6 Find the remainder when 987+876+765+654+543+432+321+210 is divided by 6.

Q.7 (a) It is 7:00 P.M. currently. What time (in A.M.or P.M.) will be in the next 1500 hours?

Q.7 (b) A dealer has 1000 kg sugar and he sells a part of it at 8% profit and the rest of it at 18% profit. The overall profit he earns is 14%. What is the quantity which is sold at18% profit?

Q.8 Tea worth Rs.126 per kg and Rs135perKg are mixed with a third variety in the ratio 1:1:2. If the mixture is worth Rs 153 per Kg, find the price of the third variety in per Kg.

Q.9 How many litres of 25% solution of acid, should be added to 600 litres of 10% solution of acid so that the resulting mixture will contain more than 12% but less than 15% of acid content?

Q.10 Two pipes can fill a cistern in 8 and 12 hours respectively. The pipes are opened simultaneously and it takes 12 minutes more to fill the cistern due to leakage. If the cistern is full what will be the time taken by the leakage to empty it?

Q.11 If $x \equiv 4(mod 7)$ then find positive values of x .

Q.12 In a 50m race A can give a start of 5m to B and a start of 14 m to C .In the same race how much start

	can B give to C? Q.13 Solve the inequality for real x : 3 (2 – x) ≥ 2 (1 − x) Q.14 Solve: -5 ≤$\mathbf{2-3x4}$ ≤ 9 Q.15 Show that the following system of linear inequalities has no solution: x + 2y≤3, 3x + 4y> 12,x≥0,y≥ 1 Q.16 Solve : 3(x – 2)/5 ≤ 5 (2 – x)/3 Q.17 Ravi obtained 70 and 75 marks in the first two unit tests. Find the minimum marks he should get in the third test to have an average of at least 60 marks.
Entrepreneurship (066)	**PROJECT WORK** **Students have to do TWO projects in the entire academic session.** **TOPICS FOR THE PROJECT:** **1. Market Survey Submission date 15th June 2024. (This project file will be complete in summer break and submit)** **2. Business Plan Submission Date 20th August 2024.** Note: Students need to complete both the projects. Guidelines for both projects are given in the CBSE Textbook. ****For all subjects project guideline a Separate PDF share with you on school Mobile App.**
PHYSICAL EDUCATION (048)	Q1. What do you mean by Sports Management explain its five parts (Phases) . Q2. Explain various functions of sports management. Q3. Explain any five main sports committees and their Responsibilities (pre, during, post) to organize any sports Event. Q4. Explain term Tournament and Fixture .Write various types of tournament? Q5. What do you mean by Knock-out tournament?.Explain its Merits and Demerits. Q6. Define League or Round robin tournaments and its types. Explain its Advantages and Demerits. Q7. Draw a knock out and League Fixture of 19 teams and find out no. of Byes, no.of teams in upper half and lower half. Q8. What do you mean by Intramural .Explain its objectives, principles and importance? Note: Dear students please write answers of above questions in your PE notebook. Q9. PROJECT WORK:-Write History, rules & regulations, terminology, Equipments, Personalities, skills of your opted game. Draw a labeled diagram of your opted game play

<table>
<tr><td></td><td>field area.
Note: Dear students please write above project work in your PE Practical file.</td></tr>
<tr><td>COMPUTER SCIENCE</td><td>● Thoroughly study Chapter 1& 2 - Python Revision Tour I & II
● Chapter 3- Functions (Back Exercise - Programs, Solved and unsolved questions)</td></tr>
<tr><td>NCC</td><td><table>
<tr><td>1</td><td>What is fire ? Discuss the modes of spread of fire ?</td></tr>
<tr><td>2</td><td>What precautions should be taken in schools to educate students about floods?</td></tr>
<tr><td>3</td><td>Which life skills are enhanced by working as responsible volunteers during any calamity?</td></tr>
<tr><td>4</td><td>What will be your effective strategy to make a group of NCC cadets work in an efficient way, during the call of emergency?</td></tr>
<tr><td>5</td><td>Fire can be extinguished if any one or more of the three main constituents" i.e.Oxygen, heat and combustible material are removed from the scene of fire."</td></tr>
<tr><td>6</td><td>Explain the statement in the light of ways of extinguishing the fire.</td></tr>
<tr><td>7</td><td>Write the seven commands of the Indian Army, 7 commands of the Indian Air force and three commands of the Indian Navy with their headquarters.</td></tr>
<tr><td>8</td><td>Write different branches of the Indian Air force.</td></tr>
<tr><td>9</td><td>Complete your Investigatory Project as chosen by you.</td></tr>
</table></td></tr>
<tr><td>VOCAL MUSIC</td><td>1)परिभाषिएं: कण, गमक, तान, आलाप, खटका, मुरकी, अलंकार, ग्राम, मूचछना।
2)जीवनी: उस्ताद फ़ैयाज़ खां।
3)राग: भैरव छोटा ख़्याल
तान, बंदिश, सरगम गीत, लक्षण गीत।</td></tr>
<tr><td>PAINTING</td><td>Make kalamkari painting with any medium (i.e., Water, poster or acrylic) of your choice on a drawing sheet or canvas of half imperial size either horizontally or vertically.</td></tr>
<tr><td>PSYCHOLOGY</td><td>Q.1 The problem of household garbage is common in most Indian cities. The concern for a clean</td></tr>
</table>

	environment is increasing but we do not know to what extent citizens know how to dispose of the garbage that collects in their household. Visit 4 houses in the colony and ask the heads of the household the following questions. Their answers must be written down 1) What do you do with old newspapers, magazine, tins and bottles? 2) What do you do with plastic packets and other plastic objects for example toys and containers? 3) How do you dispose of kitchen waste example vegetable and fruit peels used tea leaves or tea bags, leftover food that can't be eaten? 4) How do you dispose of other used objects that contain chemical substances example torch cells, used or damaged CD, cassettes, insecticide and pesticide containers etc.? 5) Do you put all the garbage collected in your house everyday in the same place or do you put different kinds of garbage in separate dustbins/ waste baskets? 6) What happens to the garbage that is collected from your house and neighborhoods and where is it taken? 7) What is meaning of 'recycling'? 8) What can you do personally to make your colony/ neighbourhood cleaner? Compare the responses collected by you and write a summary addressing the attitude and awareness people show about waste management at the household level. **Q.2** Write Answers of Chapter 1 in Copy **Q.3** Read Chapter 6
HINDI	हिंदी भाषा और साहित्य से जुड़े विविध विषयों पर परियोजना कार्य।
APPLIED MATHEMATICS (241)	**Q-1 Find the last two digits of the product 4895×6789.** **Q-2 Two vessels P and Q contain milk and water in the ratio 5:3 and 13: 3 respectively.** **In what ratio mixtures from two vessels should be mixed to get a new mixture containing milk and water in the ratio 3 : 1 respectively?** **Q-3 Two pipes can fill the tank in 20minutes and 24 minutes respectively and a waste pipe can empty3 gallons of water per minute If all the three pipes working together can fill the tank in**

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Q-12 If $x \equiv 4 (mod 7)$ **then find positive values of** x **.**

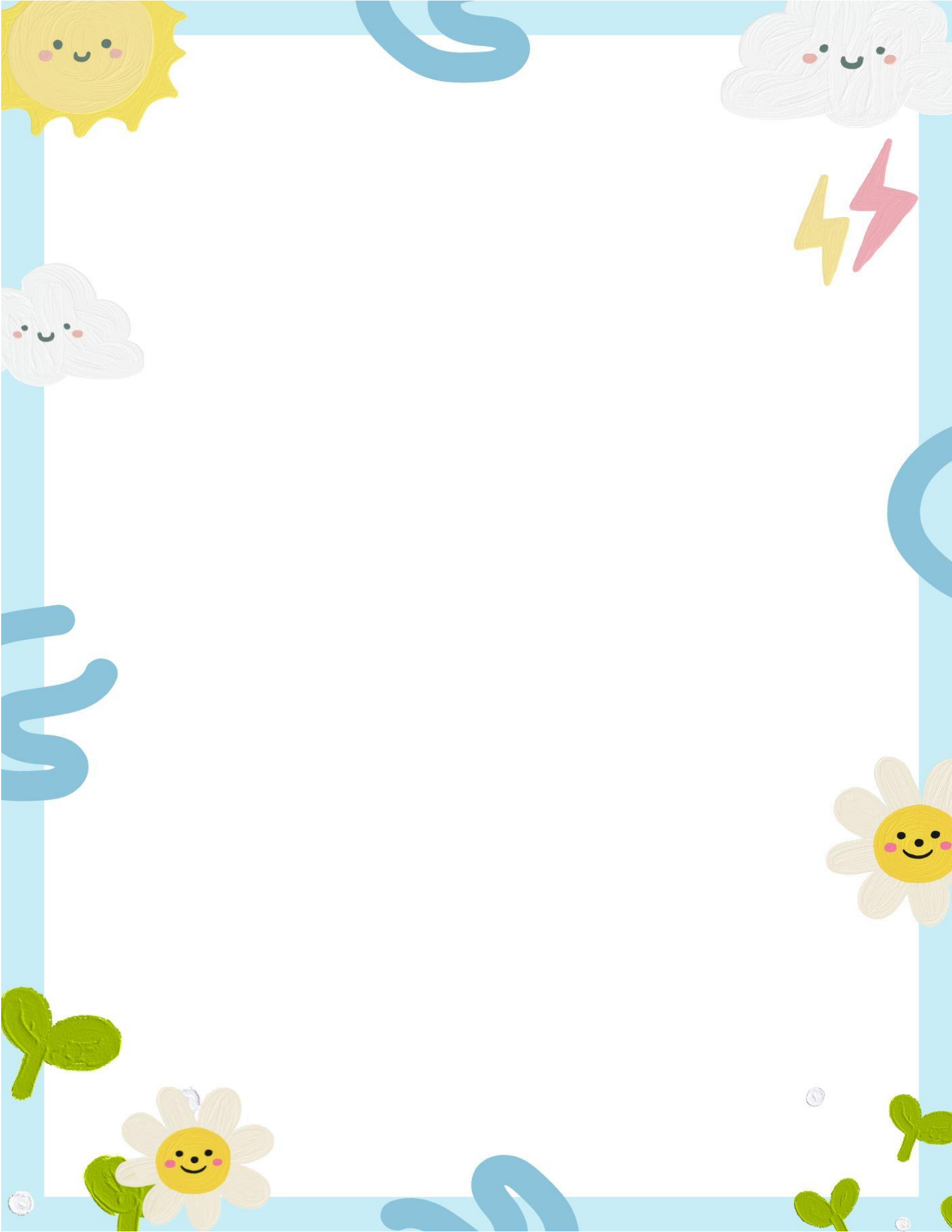
Q-13 In a 50m race A can give a start of 5m to B and a start of 14 m to C .In the same race how much start can B give to C?

Q-14 Solve the inequality for real x : 3 (2 – x **) ≥ 2 (1 –** x**)**

Q-15 Show that the following system of linear inequalities has no solution: x + 2y≤3, 3x + 4y> 12,x≥0,y≥ 1

Q-16 Solve : 3(x – 2)/5 ≤ 5 (2 – x)/3

Q-17 Ravi obtained 70 and 75 marks in the first two unit tests. Find the minimum marks he should get in the third test to have an average of at least 60 marks.



Vidyasagar School, Indore
Summer Assignment-2024-25
Class XII E
Subject: Humanities

ENGLISH

1)Prepare an English Project as prescribed by the CBSE guidelines already discussed in class.
Submission Date: June 15,2024
Spiral binding is compulsory.
2)The Last Lesson
Answer the following questions in 125-150 words:
Q1) Draw a character sketch of M Hamel.
Q2) What did Hamel teach his students in the last lesson?
Q3) What happened when the church clock struck twelve?Describe.

SOCIOLOGY

Collect data and information regarding the project work(primary data, interviews and pictures).
Preparation of PPT presentation for their respective topics.
Preparation of models and charts for their respective topics.
Following questions to be done in the copy:
Q1) Define the common indicators of demography.
Q2) Differentiate between formal and social demography.
Q3) Explain how the rural urban difference is affecting the demography.
Q4) Differentiate between Jati and varna.
Q5) Explain the two principles of the caste system.
Q6) Write a note on purity and pollution.
Q7) Define the term absentee landlord.
Q8) Explain the concept of integration and assimilation towards the tribals of india.
Q9) Critically examine the Malthusian theory of demography.
Q10) Explain the Demographic Transition Theory.
Q11) Differentiate between caste and tribe.

Political Science

1)Students will collect primary information and data through newspapers,books,internet and will complete synopsis for projects which are assigned by CBSE.
Collection of pictures .
Interview for collection of primary data.
Planning for PPT presentation.
Preparation of charts/skits.
2)Election Related Activity
Students will collect newspaper cuttings to know about the election procedure in India.With the help of these pictures prepare a collage.

HISTORY

1)Select any one theme from your History book(part I,II or III) for your project work.
2)Collection of content and data from NCERT book, different sites from Google, reference book and articles.
Collect pictures, graphs and statistical information for the topics.
Prepare PPT, charts and flashcards.
You can also prepare skits or role play.
3)In your class work copy write notes of theme 1 and 2, also write answers of the given questions from both the themes.
Read and learn the complete topics of both the themes.
Do Map Work of theme 1 and 2 from the book.

PSYCHOLOGY

A)The problem of household garbage is common in most Indian cities. The concern for a clean environment is increasing but we do not know to what extent the citizens know how to dispose of the garbage that collects in their household. Visit 4 houses in the colony and ask the heads of the household the following questions. Their answers must be written down
1)What do you do with the plastic packets and other plastic objects, for example toys and containers?
2)What do you do with old newspapers,magazines,tins and bottles ?
3)How do you dispose of other used objects that contain chemical substances, for example torch cells,used or damaged CDs,cassettes,insecticide and pesticide containers etc ?
4)How do you dispose of kitchen waste, for example vegetable and fruit peels, used tea leaves or tea bags, leftover food that cannot be eaten ?
5)Do you put all the garbage collected in your house everyday in the same place or do you put different kinds of garbage in separate dustbins/waste baskets?
6)What happens to the garbage that is collected from your house and neighbourhood and where is it taken?
7)What is the meaning of 'recycling'?
8)What can you do personally to make your colony/neighbourhood more clean?
Compare the responses collected by you and write a summary addressing the attitude and awareness people show about waste management at household level.
B)Write answers of chapter 1.
C)Read chapter 6.

PHYSICAL EDUCATION

1)What do you mean by sports management? Explain its five parts(Phases).
2)Explain various functions of sports management.
3)Explain any five main sports committees and their responsibilities (pre,during,post) to organise any sport event.
4)Explain the term tournament and fixture. Write various types of tournaments.
5)What do you know about the knock-out tournament? Explain its merits and demerits.
6)Define league or round robin tournaments and its types. Explain its advantages and demerits.
7)Draw a knockout and league fixture of 19 teams and find out number of byes, number of teams in upper half and lower half.
8)What do you mean by intramural? Exits objectives, principles and importance.
Note-Dear students please write answers of above questions in your PE notebook.

Project Work-Write history, rules and regulations,terminology, equipment,personali,skills of your opted game. Draw a labelled diagram of your opted game play field area.Write the project work in your PE Practical file.

HINDI

हिंदी भाषा और साहित्य से जुड़े विविध विषयों पर परियोजना कार्य।

PAINTING

Make Kalamkari painting with any medium(water,poster or acrylic)of your choice on a drawing sheet or canvas of half imperial size either horizontally or vertically.

Vocal Music

1)परिभाषिएं: कण, गमक, तान, आलाप, खटका, मुरकी, अलंकार, ग्राम, मूचछना।

2)जीवनी: उस्ताद फ़ैयाज़ खां।

3)राग: भैरव छोटा ख़्याल

तान, बंदिश, सरगम गीत, लक्षण गीत।

MATHEMATICS

1. If $y = \sqrt{\log\{\sin(x^2 - 1)\}}$ find $\frac{dy}{dx}$

2. If $y = \tan^{-1}\left(\frac{x}{1+6x^2}\right)$, find $\frac{dy}{dx}$

3. Differentiate w.r.t. $\cot^{-1}\left(\frac{\sqrt{1+\sin x}+\sqrt{1-\sin x}}{\sqrt{1+\sin x}-\sqrt{1-\sin x}}\right)$.

4. If $\sqrt{1-x^2} + \sqrt{1-y^2} = a(x-y)$ prove that $\frac{dy}{dx} = \sqrt{\frac{1-y^2}{1-x^2}}$

5. If $y = \tan^{-1}\left(\frac{2^{x+1}}{1-4^x}\right)$, find $\frac{dy}{dx}$.

6. If $xy\log(x+y) = 1$, prove that $\frac{dy}{dx} = -\frac{y(x^2y+x+y)}{x(xy^2+x+y)}$

7. Differentiate w .r .t. x : $\log\tan\left(\frac{\pi}{4} + \frac{x}{2}\right)$.

8. If $y = \cos^{-1}\left(\frac{2x-3\sqrt{1-x^2}}{\sqrt{13}}\right)$, find $\frac{dy}{dx}$

9.If $\tan^{-1}\left(\frac{x^2-y^2}{x^2+y^2}\right) = a$, Prove that $\frac{dy}{dx} = \frac{x(1-\tan a)}{y(1+\tan a)}$

10. If $\sqrt{y+x} + \sqrt{y-x} = c$, show that $\frac{dy}{dx} = \frac{y}{x} - \sqrt{\frac{y^2}{x^2} - 1}$

11. If $y = \frac{-3\sin(3X-1)}{2\sqrt{\cos(3X-1)}}$ find $\frac{dy}{dx}$

12. If $y = \frac{\sin xe^x}{-3e^{2-3x}}$ find $\frac{dy}{dx}$

13. Write all formula of Differentiation and principal value of Inverse trigonometry function.

14. Write all property of inverse trigonometry

15. Write all practical activities in your practical file (pdf of activities attached with assignment)