



Delhi Public School Gwalior

(Under the aegis of DPS Society, New Delhi)

Holiday Assignment

Class - X

Session (2024-25)



Dear Parents

Greetings of the day!

Vacations are the best time to relax and enjoy. Summer vacations are the reason behind fun in the sun, beach and shadow of the umbrella, but it is also the time to keep some analogy of academics alive in the fun to chisel the inherent potential inside your child. My suggestion to you is to spend these holidays being sociable and be vibrant in undertaking your plans so that the vacation is made purposeful.

To begin with, enhance every precious moment prudently by motivating your child to read informative and enlightening books. Help them improve their speech by conversing with them on every possible occasion and strop their vocabulary by providing them with new words. Spend substantial time visiting your kith and kin and people in your vicinity. Hold parley with your child on daily happenings and crucial world events as this is the best time to update, put forth your thoughts, notions and ideas before your ward and ask for an opinion, be a constant supporter of tolerance and disseminate it amongst people, teach your child to help and let him/her realize the meaning of real happiness and harmony and certainly root out all possible ill feelings and factions. Try being friendly and benevolent to all, let your child play the part in family reunions which will strengthen your family bond. Look out for the ways to abrade the plodding routine and take up some supportive vigorous activities with your child like swimming, cycling, jogging, painting or any other activity that your child enjoys.

It's your time to make every single moment eventful and memorable for your child and fill them with loads of experiences, which he/she eagerly wants to share with his/her pals and Educators when returned to School.

I wish you a pleasant vacation!

Regards

**Principal
Delhi Public School Gwalior**

ADD ONS TO MAKE YOUR VACATION MEANINGFUL !!

Childhood is a crucial stage of development. Most of life's important lessons are learnt here! Let us join hands and make sincere efforts to augment and hone the learning process of the child through inculcation of self learning and keen observation.

- * Let us attempt to enable them by allowing them to assume responsibilities of the routine household and shopping chores. (e.g.: laying the table, serving the guests, making their beds, buying groceries from the nearby stores etc.)**
- * Let us make them aware about their social responsibilities which will transform them into a responsible citizen of our society. (e.g.: keeping the surroundings clean, make use of public litter bins, switching off lights / fans / closing the taps properly etc.)**
- * They should be taught how to connect with Almighty God through prayers and meditation. (e.g.: daily prayers, thought of the day, meditate to improve the concentration etc.)**
- * Socialize and connect with people, neighbours and relatives. (e.g.: meeting & greeting neighbours, helping the elderly around, be friendly to the peers etc.)**

We wish all the great for your summer holiday time. May all the pleasure in the world embrace you, let your fun endless with friends and family.

Note : Kindly do all the Holiday Assignments neatly and submit it latest by July 10, 2024.

SUBJECT – ENGLISH

A. READING

In the **Main Course Book**, complete the following units:-

Unit 4- Environment

Unit 5- Travel and Tourism.

B. LITERATURE

Engage yourself in reading the Drama '**The Dear Departed**' from Literature Reader.

On the basis of your reading answer the following :-

* Write the summary of the Drama.

* Irony in the title

* Name the characters of the play and mention your favourite character and why

Compile the work in a file and submit the same.

C. GRAMMAR

In the Work Book, complete the following exercises :-

* Integrated Grammar Practice 2

* Integrated Grammar Practice 3

* Integrated Grammar Practice 4

* Integrated Grammar Practice 5

***Revise all the chapters done in Literature Reader thus far**

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SUBJECT – HINDI

ग्रीष्मकालीन गृहकार्य

प्रश्न 1 सूरदास/तुलसीदास का सचित्र जीवन परिचय देते हुए उनका चित्र चिपकाइए तथा कोई दो पद/दो चौपाई, दो दोहे लिखिए।

प्रश्न 2 अर्थालंकार के पाँचों भेदों के दो-दो उदाहरण लिखिए।

प्रश्न 3 लोकनृत्य से आप क्या समझते हैं ? बिहार एवं मध्यप्रदेश के किन्हीं दो-दो लोकनृत्यों का सचित्र वर्णन कीजिए।

प्रश्न 4 'देश-प्रेम' पर एक अनुच्छेद लिखिए। शब्द सीमा 120 शब्द।

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SUBJECT – SANSKRIT

ग्रीष्मकालीन गृहकार्यम्

1. 'उपपद विभक्ति' द्वितीया से सप्तमी तक का फ्लोचार्ट बनाएं।

2. कृदन्त, तद्धित और स्त्री प्रत्ययों के दो-दो उदाहरण लिखें।

3. 'वृक्षाः अस्माकम् मित्राणि' विषय पर 60 शब्दों में अनुच्छेद लिखें।

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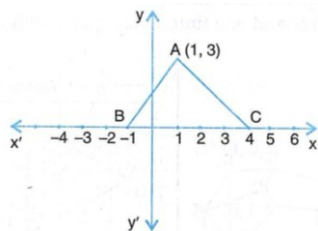
SUBJECT – MATHEMATICS

General Instructions :

- Holiday Assignment consists of Multiple Choice questions, Assertion and Reasoning questions , Case based questions and solve the following questions.
- All the work to be done in A4 sized ruled sheets which are to be arranged in a stick file.
- All the best! Stay Home, Stay Safe!

Multiple Choice Questions

- Q.1 The LCM and HCF of two rational numbers are equal, then the numbers must be
(a) prime (b) co-prime (c) composite (d) equal
- Q.2 HCF of two positive integers is always
(a) a multiple of their LCM (b) A factor of their LCM
(c) divisible their LCM (d) none of these
- Q.3 If α, β, γ are the zeroes of the polynomial $f(x) = ax^3 + bx^2 + cx + d$, then $\alpha^2 + \beta^2 + \gamma^2 =$
(a) $\frac{b^2 - ac}{a^2}$ (b) $\frac{b^2 - 2ac}{a}$ (c) $\frac{b^2 + 2ac}{b^2}$ (d) $\frac{b^2 - 2ac}{a^2}$
- Q.4 If α, β are the zeros of the polynomial $f(x) = x^2 - p(x+1) - c$ such that $(\alpha+1)(\beta+1) = 0$, then $c =$
(a) 1 (b) 0 (c) -1 (d) 2
- Q.5 If $2x - 3y = 7$ and $(a + b)x - (a + b - 3)y = 4a + b$ represent coincident lines, then a and b satisfy the equation
(a) $a + 5b = 0$ (b) $5a + b = 0$ (c) $a - 5b = 0$ (d) $5a - b = 0$
- Q.6 If $am \neq bl$, then the system of equations $ax + by = c$ and $lx + my = n$
(a) has a unique solution (b) has no solution
(c) has infinitely many solutions (d) may or may not have a solution
- Q.7 If the coordinates of one end of a diameter of a circle are (2, 3) and the coordinates of its centre are (-2, 5), then the coordinates of the other end of the diameter are
(a) (-6, 7) (b) (6, -7) (c) (6, 7) (d) (-6, -7)
- Q.8 In the figure the area of ΔABC (in square units) is



- (a) 15 (b) 10 (c) 7.5 (d) 2.5

- Q.9 If a number x is chosen from the numbers 1, 2, 3, and a number y is selected from the numbers 1, 4, 9. Then, $P(xy < 9)$
- (a) $\frac{7}{9}$ (b) $\frac{5}{9}$ (c) $\frac{2}{3}$ (d) $\frac{1}{9}$
- Q.10 The probability of guessing the correct answer to a certain test questions is $\frac{x}{12}$. If the probability of not guessing the correct answer to this question is $\frac{2}{3}$, then $x =$
- (a) 2 (b) 3 (c) 4 (d) 6

Assertion Reasoning Questions

Direction of questions : In the following questions, A statement of Assertion (A) is followed by a statement of Reason (R).

- (A) Both (A) and (R) are true and (R) is the correct explanation of (A).
 (B) Both (A) and (R) true but (R) is NOT the correct explanation of (A).
 (C) (A) is true but (R) is false.
 (D) (A) is false and (R) is true.

Q.11 **Statement – 1 (Assertion) :** HCF and LCM of two natural numbers are 25 and 815 respectively.

Statement – 2 (Reason) : LCM of two natural numbers is always divisible by their HCF.

Q.12 **Statement – 1 (Assertion) :** HCF of two consecutive natural numbers is 1.

Statement – 2 (Reason) : HCF of two co-primes is 1.

Q.13 **Statement – 1 (Assertion) :** A quadratic polynomial having $2 + \sqrt{3}$ and $2 - \sqrt{3}$ as its zeroes is given by $f(x) = x^2 - 4x + 1$.

Statement – 2 (Reason) : Quadratic polynomials whose two zeroes are α and β are given by $f(x) = k \{x^2 - x(\alpha + \beta) + \alpha\beta\}$, where k is any non-zero real number.

Q.14 **Statement – 1 (Assertion) :** If α and β are the zeroes of the quadratic polynomial $kx^2 + 4x + 4$, where k is an integer such that $(\alpha + \beta)^2 - 2\alpha\beta = 24$, then $k = 1$.

Statement – 2 (Reason) : If α and β are zeroes of the polynomial $ax^2 + bx + c$, $a \neq 0$, then $\alpha + \beta = -\frac{b}{a}$ and $\alpha\beta = \frac{c}{a}$.

Q.15 **Statement – 1 (Assertion) :** Avni and Manvi were born in the year 2000. The probability that they have the same birthday is $\frac{1}{366}$.

Statement – 2 (Reason) : Leap year has 366 days.

Q.16 **Statement – 1 (Assertion) :** The area of the rectangle formed by the lines representing $x = 8$, $y = 6$ with the coordinate axes is 24 sq. units.

Statement – 2 (Reason) : The system of equations $x = 8, y = 6$ is consistent with a unique solution.

Q.17 **Statement – 1 (Assertion) :** If the system of equations $3x + 6y = 10$ and $2x - ky + 5 = 0$ is inconsistent, then $k = -4$.

Statement – 2 (Reason) : The system of equations $a_1x + b_1y + c_1 = 0$ and $a_2x + b_2y + c_2 = 0$ is inconsistent iff $\frac{a_1}{a_2} = \frac{b_1}{b_2} = \frac{c_1}{c_2}$.

Q.18 **Statement – 1 (Assertion) :** If the centroid of the triangle having its vertices at $A(1, a), B(2, b)$ and $C(c^2, -3)$ lies on x -axis, then $a + b = 3$.

Statement – 2 (Reason) : On y -axis, x -coordinate of every point is zero.

Q.19 **Statement – 1 (Assertion) :** The point $A(3,4), B(2, 7), C(4, 4)$ and $D(3, 5)$ are such that one of them lies inside the triangle formed by the remaining three points.

Statement – 2 (Reason) : Centroid of a triangle always lies inside the triangle.

Q.20 **Statement – 1 (Assertion) :** A cubical die is rolled. The probability of getting a composite number is $\frac{1}{3}$.

Statement – 2 (Reason) : In a throw of a cubical die, the probability of getting a prime number is $\frac{2}{3}$.

Solve the following :

Q.21 Find the largest positive integer that will divide 258, 369 and 435 leaving remainders 6, 12 and 15 respectively.

Q.22 Prove that $5 + \sqrt{3}$ is an irrational number.

Q.23 Find the zeroes of the polynomial $8\sqrt{3}x^2 + 5x - \sqrt{3}$ and verify the relationship between zeroes and its co-efficients.

Q.24 If the sum of the zeroes of the polynomial $f(x) = kx^2 + 2x + 3k$ is equal to their product, find the value of k .

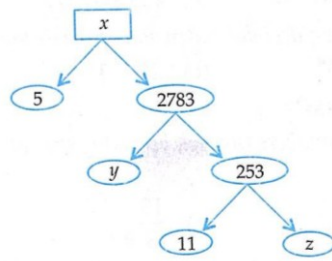
Q.25 Draw the graph of the equations $5x - y - 7 = 0$ and $x - y + 1 = 0$. Determine the coordinates of the vertices of the triangle formed by these lines and the x -axis, and shade the triangular region.

Q.26 The sum of a two digit number and the number formed by interchanging the digit is 132. If 12 is added to the number, the new number becomes 5 times the sum of the digits. Form a pair of linear equations for the above and find the solution by substitution method.

- Q.27 A jar contains only red, green and white balls. The probability of selecting a red ball from the jar at random is $\frac{2}{5}$ and that of selecting a white ball is $\frac{1}{5}$. If the jar contains 12 green balls, find the total number of balls in the jar.
- Q.28 A group consists of 12 persons, of which 3 are extremely patient, other 6 are extremely honest and rest are extremely kind. A person from the group is selected at random. Assuming that each person is equally likely to be selected, find the probability of selecting a person who is (i) extremely patient (ii) extremely kind or honest. Which of the above values you prefer more.
- Q.29 If $(1, 2)$, $(4, y)$, $(x, 6)$ and $(3, 5)$, taken in order are the vertices of a parallelogram, find the values of x and y .
- Q.30 The line segment joining the points A $(2, 1)$ and B $(5, -8)$ is trisected at the points P and Q such that P is nearer to A. If P also lies on the line given by $2x - y + K = 0$, find the value of K.

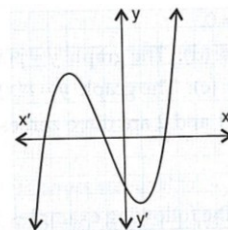
Case Study Based Questions

- Q.31 A Mathematical Exhibition is being conducted in your school and one of your friends is making a model of a factor tree. He has some difficulty and asks for your help in completing a quiz for the audience. Observe the above factor tree and answer the following:



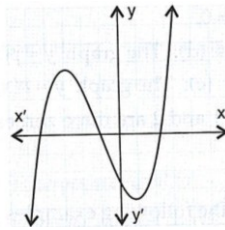
Based on the given information answer the following questions:

- What will be the value of x ?
 - What will be the value of y ?
 - Find the prime factorization of 13915.
- Q.32 Polynomials are everywhere. They play a key role in the study of algebra, in analysis and on the whole many mathematical problems involving them. Since polynomials are used to describe curves of various types, engineers use polynomials to graph the curves of roller coasters.

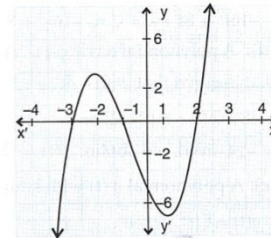
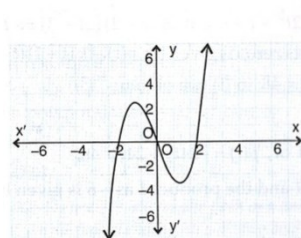


Based on the given information answer the following questions:

- (i) If the Roller Coaster is represented by the graph $y = p(x)$, shown in figure, then write the type of the polynomial.



- (ii) If the path traced by the Roller Coaster is represented by the graph $y = p(x)$, shown in figure then write the number of zeroes.



- (iii) Find the zeros for the polynomials in question (ii).

- Q.33 Teachers and students of class X of a school had gone to Nandan Kannan for study tour. After visiting different places of Nandan Kannan, lastly, they visited bird's sanctuary and deer park. Rohan is a clever boy and keen observer. He put the question to his friends "How many birds are there and how many deer are there (at particular time) in Nandan Kannan?" Rahul's friend, Nishith gave the correct answer the follows:
'Nishith answered that total animals have 1000 eyes and 1400 legs'

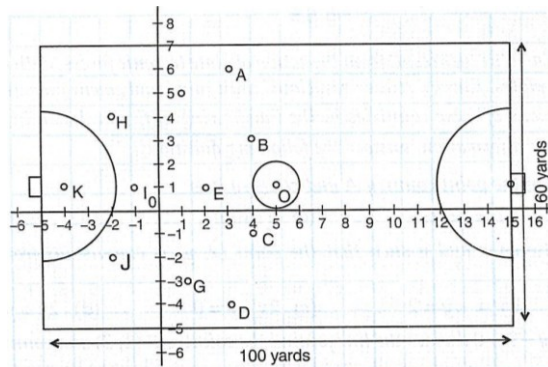


- (i) If x and y be the number of birds and deer respectively, what is the equation of total number of eyes?
 (ii) What is the equation of total number of legs?
 (iii) How many birds are there in the Zoo?

- Q.34 A hockey field is the playing surface for the game of hockey. Historically, the game was played on natural turf (grass) but nowadays it is predominantly played on an artificial turf. It is rectangular in shape – 100 yards by 60 yards. Goals consist of two upright posts placed equidistant from the centre of the backline, joined at the top by a horizontal crossbar. The inner edges of the posts must be 3.66 metres (4 yards) apart, and the lower edge of the crossbar must be 2.14 metres (7 feet) above the ground. Each team plays with 11 players on the field during the game including the goalie. Positions you might play include:

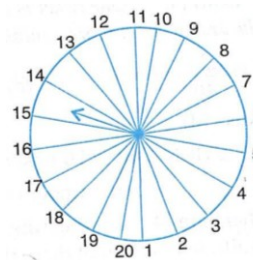
Forward : As shown by players A, B, C and D
 Midfielders : As shown by players E, F and G,
 Fullbacks : As shown by players H, I and J
 Goalie : As shown by player K.

Using the picture of a hockey field below: answer the following questions:



- (i) Find the coordinates of the centroid of $\triangle EHI$.
- (ii) If a player P needs to be at equal distances from A and G, such that A, P and G are in straight line, then find the coordinate of P.
- (iii) Find the point on x axis equidistance from I and E.

Q.35 In a game of chance consisting of spinning an arrow which comes to rest pointing at one of the numbers 1, 2, 3 ,, 20 (see figure) and these are equally likely outcomes. Three persons Aarushi, Avni and Mira decide to play the game. Aarushi wins ₹5000 if the arrow points at an even number, Mira wins ₹8000 when arrow points at an odd number and Avni wins ₹12,000 when arrow points at a prime number.



Based on the above information answer the following questions:

- (i) Find the total number of possible outcomes in the game.
- (ii) What are the chances of Aarushi winning ₹5000?
- (iii) What are the chances of Mira and Avni winning their prize money?

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SUBJECT – SCIENCE

General Instructions

1. Do all the questions (Physics, Chemistry & Biology) in one notebook.
2. Write answers in a proper sequence.
3. Do neat & clean work.
4. Draw diagrams where ever required.

Section-A (Physics)

Objective Type Questions

- Q.1 The focal length of plane mirror is
(a) 0 (b) Infinite (c) 25 cm (d) -25 cm
- Q.2 Image formed by a convex spherical mirror is
(a) Virtual (b) Real (c) Enlarged (d) Inverted
- Q.3 The mirror used by ENT specialists is
(a) Plane (b) Concave (c) Convex (d) Plane Convex
- Q.4 Magnification produced by a rear view mirror fitted in vehicles.
(a) is less than one
(b) is more than one
(c) is equal to one
(d) can be more than or less than one, depending upon the position of object in front of it.
- Q.5 A lens converges light rays. The lens is
(a) Plane (b) Prism (c) Concave (d) Convex

Descriptive Questions

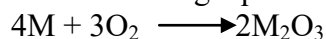
- Q.1 Why do we prefer a convex mirror as a rear view mirror in vehicles?
- Q.2 Light enters from air to glass, having a refractive index 1.50. What is the speed of light in the glass? The speed of light in vacuum is 3×10^8 m/s.
- Q.3 Write steps of sign convention.
- Q.4 Draw all ray diagrams of concave mirror.
- Q.5 An object 5 cm is placed at a distance of 25 cm in front of a convex mirror of radius of curvature 30 cm. Find the position, nature and size of the image formed.

Section-B (Chemistry)

Objective Type Questions

- Q.1 A white precipitate can be obtained by adding dilute sulphuric acid to :
(a) CuSO_4 solution (b) NaCl solution (c) BaCl_2 solution (d) Na_2SO_4
- Q.2 A white precipitate will be formed if we add common salt solution to:
(a) $\text{Ba}(\text{NO}_3)_2$ solution (b) KNO_3 solution (c) AgNO_3 solution (d) $\text{Mg}(\text{NO}_3)_2$

Q.3 Consider the following equation of the chemical reaction of a metal M :



This equation represents:

- (a) combination reaction as well as reduction reaction
- (b) decomposition reaction as well as oxidation reaction
- (c) oxidation reaction as well as displacement reaction
- (d) combination reaction as well as oxidation reaction

Q.4 The process of respiration is :

- (a) an oxidation reaction which is endothermic
- (b) a reduction reaction which is exothermic
- (c) a combination reaction which is endothermic
- (d) an oxidation reaction which is exothermic

Q.5 Which of the following can be decomposed by the action of light ?

- (a) NaCl (b) KCl (c) AgCl (d) CuCl

Descriptive Questions

Q.1 Name the reaction which takes place when ferrous sulphate is heated.

Q.2 Give an example of displacement reaction.

Q.3 Name the substance which is getting oxidised in the reaction, $H_2S + Cl_2 \longrightarrow 2HCl + S$.

Q.4 Giving an example, list two informations which make a chemical reaction more useful?

Q.5 Write the balanced chemical equation for the following reaction and identify the type of reaction.

Nitrogen gas is treated with hydrogen gas in the presence of a catalyst at 773 K to form ammonia gas.

Section – C (Biology)

Objective Type Questions

Q.1 Trypsin acts in –

- (a) Acidic medium (b) Neutral medium
(c) Alkaline medium (d) Slightly acidic medium

Q.2 Common respiratory substrate is –

- (a) Glucose (b) Sucrose (c) Galactose (d) Lactose

Q.3 Photosynthesis occurs in –

- (a) Ribosomes (b) Chloroplasts (c) Mitochondria (d) Vacuole

Q.4 Opening and closing of stomata is due to :

- (a) High pressure of gases.
- (b) Movement of water in and out of the guard cells.
- (c) Stimulus of light in the guard cells.
- (d) Diffusion of CO_2 in and out of the guard cells

Q.5 If salivary amylase is lacking in the saliva, which of the following events in the mouth cavity will be affected?

- (a) Protein breaking down into amino acid.
- (b) Starch breaking down into sugars.
- (c) Fats breaking down into fatty acids and glycerol.
- (d) Absorption of vitamins.

Descriptive Questions

- Q.1 Name the following –
- (a) Cells that surround a stomatal pore.
 - (b) The cell organelle where photosynthesis occurs.
 - (c) An enzyme secreted by gastric glands in stomach that acts on protein.
- Q.2 Why is the rate of breathing in aquatic organism much faster than in terrestrial organisms?
- Q.3 “All plants give out oxygen during day and CO₂ during night.” Do you agree with this statement? Give reason.
- Q.4 Explain the three pathways of breakdown of glucose in living organisms.
- Q.5 Explain the significance of peristaltic movement that occurs all along the gut during digestion.

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SUBJECT – SOCIAL SCIENCE

Instructions -

1. The project should be submitted in a handmade file or folder.
2. It should be prepared/ made from eco-friendly products without incurring too much expenditure.
3. Refer CBSE website (syllabus- Social Science) for the layout of the project report.
4. Refer Lesson-5 (Economics) for the relevant details.

Social Science

With reference to exploitation of consumers as per the Consumer Protection Act 1986, interview (telephonically or as per comfort) ten persons in your neighbourhood or relation and collect varied experiences in case they have been victims of any exploitation by shopkeepers.

Suggest the ways in which the consumers can be compensated along with relevant photographs if possible.

Conclude the report along with your findings in 100-150 words. You may systematically record your findings in the following areas:

Suggestive questions to be asked during interview are:

- i) Name of the person.
- ii) When you buy some item, do you insist on a bill?
- iii) Do you keep the bill carefully?
- iv) Do you look for ISI mark, Agmark, expiry date, etc.?
- v) A shopkeeper tells you to buy a tooth brush, but you want to buy a tooth paste only from his shop. What do you do?
- vi) If you realize that you have been tricked by the shopkeeper, have you bothered to complain to him?
- vii) Do you bother taking next step if the shopkeeper is not accepting his/her fault?
- viii) Have you heard about Consumer forum?
- ix) Do you know that they are there to help you to get compensation?
- x) Have you been a victim of online fraud?

OR

‘Consumer Rights in India’

Make a project report on the given topic covering the following points:

1. Who is a ‘Consumer’?
2. Malpractices in the market place.
3. Need for protecting the consumers.
4. Consumer movements in India.
5. Different ways to protect consumers.
6. Problems with the consumer movements.
7. Consumer Rights- All types
8. Learning to become well-informed consumer.

- Note:**
- i. Design a poster to aware consumers.
 - ii. Draw/ paste various safety marks.



(NOTE- Project can be presented through File /Folder/Scrapbook etc. as well!

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SUBJECT – BANKING & INSURANCE

Prepare a practical file on the following topics -

1. Explain the different types of negotiable instruments along with specimen.
2. Prepare a detailed report on different types of General insurance.
3. Explain the utility services provided by the banks.

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SUJET : FRANÇAIS

1. Écrivez une lettre à votre ami et décrivant comment vous passez vos vacances à la maison?
(Write a letter to your friend describing how did you spend your vacation at home)
(Points to be considered:
What all you did to be in good health or learnt something new or tried your hands on cooking/art or any other innovative activities)
2. Do in your register
Préparez un PPT sur le sujet " Le système éducatif en France et en Inde. (Make a PPT on" Education system of India and France")

SUBJECT – ARTIFICIAL INTELLIGENCE

1. **Activity - Design Your Dream Smart Home (Practical Notebook)**

Make your project on A4 sheet paper. Share a minimum of five ideas about Smart Home; add pictures to make it attractive or you can also draw pictures. On the first page write topic name, your name, class and section. From second page write information about the topic. Use at least 5 pages to complete the project. Don't write information on both side of the page.

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SUBJECT – INFORMATION TECHNOLOGY

- 1) Create a file by inserting images and apply following image features :
 - ❖ Arrangement
 - ❖ Text Wrapping
- 2) Write a small report on **Types of Network** On the basis of the followings:
 - ◆ What is Network?
 - ◆ Difference between LAN ,MAN,WAN(with relevant pictures)
 - ◆ Speed of different networks.

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