O.P. JINDAL SCHOOL
BALKUDRA, PATRATU

Diwali Holiday Homework

CLASS - X

ASSIGNMENT 1.

Newspaper Front Page (on A3 Size Paper/Chart paper)

Design a newspaper front page featuring both stories:

Headline 1: "Young Scientist Wins National Award for Butterfly Research!"

Headline 2: "Invisible Man on the Run – Chaos in London!"

Include articles, interviews, and editorials linking science, curiosity, and ethics.

OR

"If I Were a Scientist…" Poster

Make a poster on the theme:

"If I Were a Scientist – I Would Use Science to Help, Not Harm."

Include a catchy slogan, creative design, and one quote from each story.

Add a few lines on what you would invent and how it would help people.

ASSIGNMENT 2

Small Acts, Big Impact - 'Nature Conservation Diary' (Self-made, consists of 10 pages)

✅ Over the holidays, keep a "Nature Care Diary" where you document:

☐ One small act each day (watering plants, not wasting paper, picking up litter, feeding birds & any other acts as per your choice).

☐ Reflect on how these acts, like the 'Dust of Snow', can positively impact the environment and your own mood.

✅ Write a final reflection paragraph comparing these actions to the poem's message.

✅ Include 2–3 facts about how small environmental actions help biodiversity (link to science)

Add a few pictures of your own, doing those acts

ASSIGNMENT 3. Create a Travel Brochure or Poster (Self -made)

Activity: Design a handmade travel brochure or poster advertising "Glimpses of India Tours."

✅ Include highlights of:

Goa: old Portuguese bakeries.

Coorg: coffee estates, nature walks.

Assam: tea plantations, river journeys. (Read the Lesson 'Glimpses of India' before doing it)

✅ Add a catchy slogan and artistic elements to attract tourists! Make it attractive with drawing/pasting photos relevant to the above-mentioned places.

NOTE- (Assignment 2 & 3 only for those who did not submit for Term -1 Assessment)

HINDI

सामान्य निर्देश

1. सभी उत्तर सुंदर हस्तलेख में उत्तर पुस्तिका में लिखें।

2. प्रत्येक उत्तर मौलिक, संक्षिप्त तथा बिंदुवार लिखें।

3. चित्र, चार्ट, माइंडमैप आदि का प्रयोग प्रस्तुति में करें।

4. जमा करने की तिथि – विद्यालय खुलने के पहले दिन।

क्षितिज भाग – 2 से आधारित कार्य

1. पाठ – उत्साह और अट नहीं (सूर्यकांत त्रिपाठी निराला) कविता के भावों के आधार पर "सफलता का मंत्र – दृढ़ संकल्प" विषय पर 150 शब्दों में एक अनुच्छेद लिखिए। कविता में प्रयुक्त तीन अलंकारों की पहचान कीजिए और उसे लिखिए।

2. पाठ – एक कहानी यह भी (मन्नू भंडारी)
   इस कहानी से आपने नारी सशक्तिकरण के संबंध में क्या प्रेरणा ली, इस पर 100 शब्दों का निबंध लिखिए।

कृतिका भाग – 2 से आधारित कार्य

1. साना-साना हाथ जोड़ि (मधु कांकरिया) कहानी के मुख्य बिंदुओं को बुलेट पॉइंट्स में लिखकर एक माइंड मैप तैयार करें।

व्याकरण अभ्यास

1. कर्तृवाच्य, कर्मवाच्य और भाववाच्य से संबंधित 10-10 वाक्यों की सूची तैयार कीजिए।

लेखन कौशल

1. पत्र लेखन (औपचारिक) विषय: "विद्यालय में हरित दीपावली अभियान संचालित करने हेतु प्रधानाचार्य को पत्र लिखिए।"

2. निबंध लेखन विषय: "पर्यावरण संरक्षण और दीपावली"
   (लगभग 150–200 शब्दों में)

3. 'हरित दीपावली सुरक्षित दीपावली' विषय पर एक आकर्षक विज्ञापन तैयार कीजिए।

रचनात्मक कार्य

1. "दीप से दीप जलाते चलो" विषय पर एक स्वलिखित कविता लिखिए (कम से कम 10 पंक्तियाँ)।

2. क्षितिज और कृतिका के प्रत्येक अध्याय से 2-2 बहुविकल्पीय प्रश्न (MCQs) तैयार करें।

MATHEMATICS

Objective: Prepare for board exams through practice and revision.

Tasks: Solve the following questions:

> **Real Numbers:**

1. Given that $HCF(306, 657) = 9$, find $LCM(306, 657)$.
2. Find the HCF and LCM of 60, 84 and 108 by prime factorisation method.
3. Find the greatest number which when divides 1251, 9377 and 15628 leaves remainder 1, 2 and 3 respectively.
4. Prove that $\sqrt{3}$ is an irrational number.
5. Given that $\sqrt{3}$ is irrational, prove that $5 + 2\sqrt{3}$ is irrational.

> **Linear Equations in two variables:**

1. Solve for x and y:
   $32x + 33y = 34$ and $33x + 32y = 31$
2. Find the value of k, if the system of equations $3x + y = 1$ and $(2k - 1)x + (k - 1)y = 2k + 1$ is inconsistent.
3. Determine graphically the coordinates of the vertices of a triangle, the equations of whose sides are given by $2y - x = 8$, $5y - x = 14$ and $y - 2x = 1$.

> **Quadratic Equations:**

1. Find the roots of the quadratic equation $\sqrt{2}x^2 + 7x + 5\sqrt{2} = 0$, by factorisation method.
2. Find all the possible values of x for the following equation to be true, $\sqrt{(15 - 2x)} - x = 0$.
3. Find the value of k for which the equation $x^2 + k(2x + k - 1) + 2 = 0$ has real and equal roots.
4. Two water taps together can fill a tank in $9\frac{3}{8}$ hours. The tap of larger diameter takes 10 hours less than the smaller one to fill the tank separately. Find the time in which each tap can separately fill the tank.
5. A train covers a distance of 360 km at a uniform speed. Had the speed been 5 km/hr more, it would have taken 48 minutes less for the journey. Find the original speed of the train.

> **Arithmetic progression:**

1. Which term of the A.P. 3, 15, 27, 39, ….. will be 120 more than its 21st term?
2. Which term of the A.P. 17, $16\frac{1}{5}$, $15\frac{2}{5}$, $14\frac{3}{5}$, ….. is the first negative term?
3. Solve for x: $1 + 5 + 9 + 13 + \cdots + x = 1326$.
4. The first term of an A.P. is -5 and the last term is 45. If the sum of the terms of the A.P. is 120, then find the number of terms and the common difference.

➤ **Coordinate Geometry:**

1. If the coordinates of points A and B are $(-2, -2)$ and $(2, -4)$ respectively, find the coordinates of P such that $AP = \frac{3}{7} AB$, where P lies on the line segment AB.

2. Find the ratio in which the line segment joining the points $A(3, -3)$ and $B(-2, 7)$ is divided by x-axis. Also find the coordinates of the point of division.

3. If points $A(3, 1)$, $B(5, 1)$, $C(a, b)$ and $D(4, 3)$ are vertices of a parallelogram ABCD. Find the values of a and b.

Reflection: Write a short note (1 page) on concepts found most challenging and strategies to improve.

Quantifiable Output: Submit all the solved questions and the reflection note.

SCIENCE

PHYSICS

1. When a pencil is partially dipped inside a glass filled with water then, why it appear bend. Verify this activity and explain.

2. The beam of Sunlight coming through clouds appear diverging (spreading). Examine the phenomenon.

CHEMISTRY

1. Observe and record any chemical change happening at home (e.g., rusting, food spoilage, curd formation).
   (a) Identify the type of chemical reaction
   (b) Write the chemical equation (if known)

2. Compare physical and chemical properties of metals and non-metals. Make a table with at least 5 points.

BIOLOGY

➤ Prepare the practical record of the experiments -
➤ Experimentally show that carbon dioxide is given out during respiration
➤ Identification of the different parts of an embryo of a dicot seed
➤ Preparing a temporary mount of a leaf peel to show stomata
➤ Studying Binary Fission in Amoeba and Budding in yeast with the help of prepared slides.

SOCIAL SCIENCE (Project Work)

Economics -Consumer Rights (As per instructed by CBSE)

INFORMATION TECHNOLOGY (IT)

WRITE AND LEARN

1. Differentiate between a flat file and relational database.
2. Write any four advantages of database.
3. Mention the various database objects.
4. Make a list of various spreadsheet package with their icons.

PROJECT: Make a poster that asks the students to stay away from cyber bullying.