



तत् त्वं पृथक् अपावृणु
केन्द्रीय विद्यालय संगठन



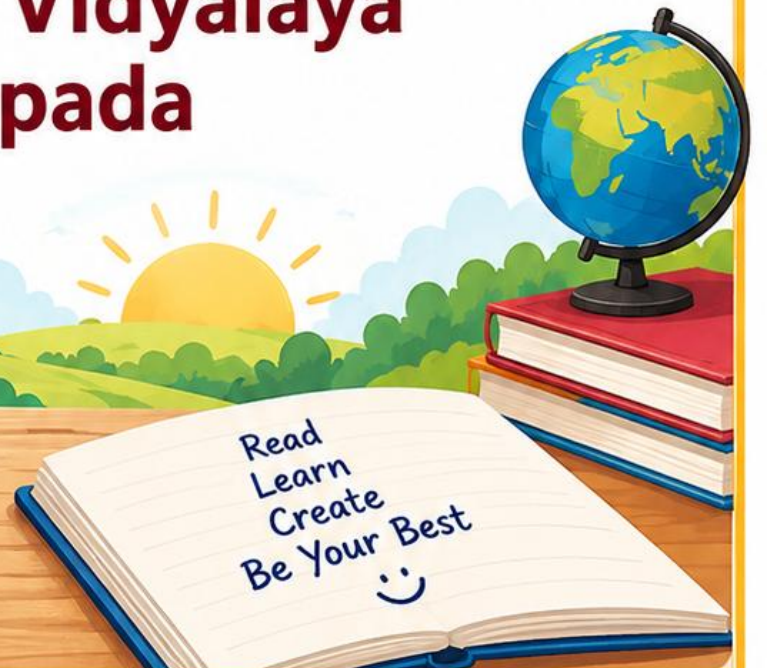
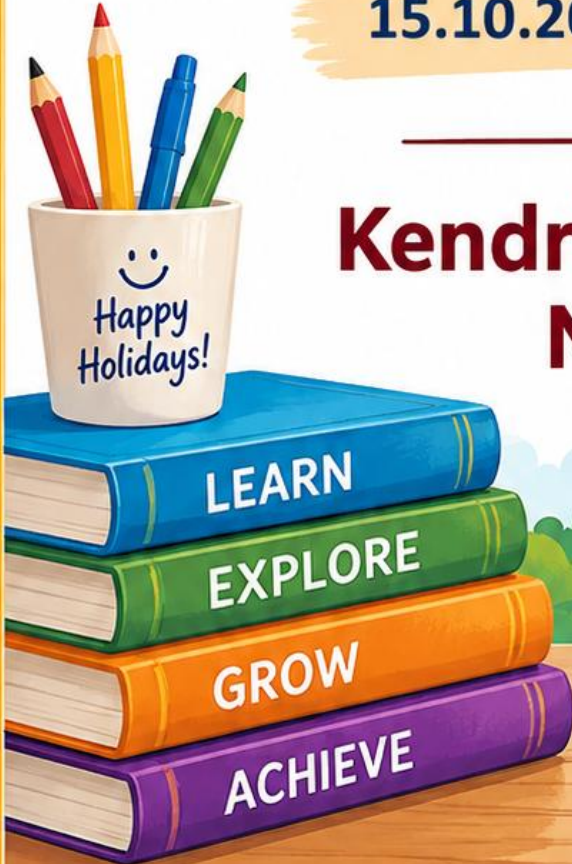
Holiday Homework for

Autumn Break

15.10.2026 to 25.10.2026



**Kendriya Vidyalaya
Nuapada**



KENDRIYA VIDYALAYA NUAPADA
AUTUMN BREAK HOLIDAY HOMEWORK (2026–27)

CLASS 1

English

- **Alphabet Writing Practice:** Write Capital Letters (A–Z) and Small Letters (a–z) neatly in the given lines .
- **All About My Family:** Fill in the blanks with your family details (number of members, parents' names, and siblings).
- **Rhyming Words Fun:** Write two rhyming words each for: Cat, Pig, Sun, Hat.
- **Action Words (Doing Words) Activity:** Practice identifying and writing common action words.

हिंदी (10 Days Activity)

हिंदी गृहकार्य - 10 दिनों की गतिविधियाँ

- * स्वर और व्यंजन का सुंदर चार्ट बनाइए।
 - * दो अक्षर वाले 5 शब्द लिखिए।
 - * तीन अक्षर वाले 5 शब्द लिखिए।
 - * पाँच फलों के नाम लिखिए।
 - * पाँच सब्जियों के नाम लिखिए।

 - * TLM Activity: रंगीन कागज से स्वर और व्यंजन के फ्लैश कार्ड बनाइए।
 - * TLM Activity: चित्रों की सहायता से 5 शब्दों का पिक्चर-वर्ड चार्ट बनाइए।

 - * मात्राओं का सुंदर चार्ट बनाइए।
 - * हिंदी वर्णमाला की एक आकर्षक माला बनाइए।
 - * अपनी पसंद की एक छोटी हिंदी कविता याद कीजिए।
- अभिभावकों के लिए निर्देश:**

कृपया बच्चों को प्रतिदिन एक-एक कार्य अपनी हिंदी कॉपी में साफ़ और सुंदर अक्षरों में पूरा करने के लिए प्रेरित करें।

Mathematics (10-Day Activity Plan)

- Day 1:** Write numbers from 1 to 20 neatly in your notebook.
- Day 2:** Draw 5 flowers and count them.
- Day 3:** Draw a circle, square, triangle, and rectangle.
- Day 4:** Make a pattern using two different colours.
- Day 5:** Solve 5 addition sums using pencils or bottle caps.
- Day 6:** Draw 10 fruits and write their numbers.

Day 7: Draw any 3 things and write their prices up to ₹20.

Day 8: Draw 3 objects found at home and identify their shapes.

Day 9: Measure your pencil using your fingers and write down the count.

Day 10: Make a picture using different shapes (Circle, Square, Triangle, Rectangle).

CLASS 2

1. English (Reading & Writing)

- * Do English reading daily (at least 1 page).
- * Learn the chapter - "This is my town" and "A show of clouds".
- * Write down 5 opposite words.
- * Write your self-introduction in about 5-7 lines.
- * Do 1 page of cursive handwriting daily.
- * Make greeting cards for your grandparents to wish them "Happy Diwali."

2. Mathematics (Fun with Numbers)

- * Make different types of shapes model or dice model.
- * Write Number Names - 1 to 100.
- * Learn and write Tables 2 to 10.
- * Do any 10 Additions (2-digit).
- * Do any 10 Subtractions (2-digit).

3. हिंदी (भाषा व ज्ञान)

- * प्रतिदिन पाँच नए शब्द लिखो और उनके अर्थ समझो। इन शब्दों को अपनी बनाई हुई डिक्शनरी में लिखिए।
- * अपने घर के आस-पास देखे जाने वाले पाँच जानवरों/पक्षियों के नाम लिखो।
- * अपने पसंदीदा त्योहार पर दस वाक्य लिखो।
- * पाठ 11 और पाठ 12 का अभ्यास करें।
- * नए-नए पसंदीदा हिंदी शब्दों की छोटी डिक्शनरी बनाएं, जिसमें उनके अर्थ लिखे हों।
- * रोजाना एक पन्ना साफ़-सुथरा सुलेख लिखो।

4. Gardening (Nature & Plants)

- * Write the names of Kharif crops and draw their pictures.
- * Write 5 names of your neighbor plants.
- * Make a shape or craft by joining dry leaves.
- * Write the names of 10 vegetables with pictures.

5. Music (Rhythm & Songs)

- * Practice Sargam (सा, रे, ग, म, प, ध, नि, सा) - sing 3 times daily.

- * Learn the patriotic song "सारे जहाँ से अच्छा".
- * Learn the children's song "लकड़ी की काठी".
- * Learn the song "We Shall Overcome."
- * Practice clapping hands in rhythm with songs.
- * Practice singing the song "Music ka Tota" with actions.

6. Sports (Fitness & Games)

- * Note down which games or sports you played during holidays (indoor or outdoor).
- * Try skipping rope, jumping jacks, or a simple race at home and write your experience in 3-4 lines.
- * Draw or paste a picture of your favorite sportsperson or sport equipment..

Subject-Hindi

प्रिय विद्यार्थियों!

छुट्टियों का आनंद लेते हुए प्रतिदिन थोड़ा-थोड़ा हिंदी का अभ्यास करें।

* Day 1

पाठ 11 - जादुई पिटारा

पाठ पढ़िए और 5 नए शब्द लिखिए।

* Day 2

जादुई पिटारा

पुराने डिब्बे से एक सुंदर जादुई पिटारा बनाइए।

* Day 3

पाठ 12 - अपना-अपना काम

पाठ पढ़िए और घर के 5 कामों के नाम लिखिए।

* Day 4

अपना-अपना काम

घर में किए जाने वाले कामों का चित्र बनाइए।

* Day 5

पाठ 13 - पेड़ों की अम्मा तिमम्क्का

पाठ पढ़िए और पेड़ों के महत्व पर 5 वाक्य लिखिए।

* Day 6

पेड़ों की अम्मा

पेड़ लगाओ पर्यावरण बचाओ विषय पर पोस्टर बनाइए।

* Day 7

पाठ 14 - किसान की होशियारी

पाठ पढ़िए और 5 नए शब्द लिखिए।

* Day 8

किसान की होशियारी

किसान का चित्र बनाकर 5 वाक्य लिखिए।

* Day 9

व्याकरण

5 विलोम शब्द और 5 पर्यायवाची शब्द लिखिए।

* Day 10

पुनरावृत्ति

अपनी पसंद की एक हिंदी कविता याद कीजिए।

★ निर्देश

* सभी लिखित कार्य Hindi holiday homework की कॉपी में करें।

* चित्र एवं पोस्टर A4 शीट पर बनाएँ।

* प्रतिदिन 10 मिनट हिंदी की पुस्तक पढ़ें।

* सभी कार्य स्वयं एवं सुंदर लिखावट में करें।

Mathematics

1. Write tables of 7 to 11 in your copy.

2. Draw a rangoli using different shapes.

3. Practice multiplication in your rough copy.

The World Around Us (TWAU)

1. My Water Diary ☞: Observe family water usage for 2 days, record 5 uses, draw/paste pictures, and identify 2 water-saving activities.
2. Design a colourful poster with the slogan “Every Drop Counts!”
3. Draw at least four ways to save water.
4. Write three water-saving rules that children can follow at home.

English (Chapter: The Big Laddoo)

- Comprehension: Answer questions based on the poem 'The Big Laddoo', fill in the blanks, and write True or False.
- Grammar: Masculine and feminine forms, singular and plural conversions, changing into singular, and making meaningful sentences.
- Creative Writing: Write about your favourite sweet, complete imagining sentences, draw/colour a giant laddoo with 5 sentences, and write about your favourite festival and festival sweets.

CLASS 4

Subject: English | Class: IV

- * Task 1: Handwriting Practice
- * Write 4 pages handwriting.
- * Task 2: Go Plastic Free!
 2. Write 5 sentences on how you can reduce plastic use at home. Design a colourful poster with the slogan "Say No to Plastic, Say Yes to Nature!"
- * Task 3: Interview with an Elder
 3. Interview any one grandparent, parent or elder in your family. Ask these five questions and write their answers in your copy:
 - * What games did you play in your childhood?
 - * What was your favourite food?
 - * Which story did you enjoy as a child?
 - * What makes you happy?
 - * What advice would you give children today?
- * Task 4: Nature Observation
 4. Observe five different plants, birds or insects near your home. Draw or paste their pictures. Write two sentences about each one in English.

TWAU

- * Q1: Plant a seed and water it daily. Observe it for 10 days. Write your observations in 5 lines.
- * 2: Stick/Draw the picture of the journey of a tiny seed/grains to food on our plate.
- * 3: Draw structure of flower and Draw structure of Leaf On A4 size sheet.
- * 4: Draw a color full diagram of plant on A3 size and Mention its parts.
- * 5: Collect spices, grains, pulses (and form any image of your choice in a frame). Do your work with creativity.
- * 6: Paste pictures of carbohydrates, fat, vitamins rich diet on A3 size sheet.
- * 7: Make a model of shelter of any animal or bird.

* 8: Revise full portion done in book and notebook.

विषय – हिंदी

भाग १: पठनीय एवं सुलेख कार्य

* १. सुलेख: प्रतिदिन अपनी हिंदी पाठ्यपुस्तक से एक अनुच्छेद एवं नए शब्दों में सुंदर सुलेख में लिखें (कुल १० पृष्ठ).

भाग २: व्याकरण एवं भाषा ज्ञान

* कार्यपत्रक-१: पर्यायवाची एवं विलोम शब्द –

* शब्द : पानी | पर्यायवाची शब्द : _____ | शब्द : दिन | विलोम शब्द: _____

* शब्द : हवा | पर्यायवाची शब्द : _____ | शब्द : मित्र | विलोम शब्द : _____

* शब्द : सूर्य | पर्यायवाची शब्द: _____ | शब्द : साथ | विलोम शब्द : _____

* शब्द : पेड़ | पर्यायवाची शब्द: _____ | शब्द : नया | विलोम शब्द : _____

* शब्द : बादल | पर्यायवाची शब्द : _____ | शब्द : अमीर | विलोम शब्द: _____

* कार्यपत्रक-२: संज्ञा एवं लिंगपहचान –

* वाक्य: शेर जंगल में रहता है। | संज्ञा शब्द छाँटिए: _____ | लिंगबदलिए: शेर - _____

* वाक्य: लड़का गेंद से खेल रहा है। | संज्ञा शब्द छाँटिए: _____ | लिंगबदलिए: लड़का - _____

* वाक्य : राजा ने सुंदर मुकुट पहना। | संज्ञा शब्द छाँटिए: _____ | लिंगबदलिए: राजा - _____

* वाक्य: अध्यापक जी पढ़ा रहे हैं। | संज्ञा शब्द छाँटिए: _____ | लिंगबदलिए: अध्यापक - _____

भाग ३: रचनात्मक लेखन

* 1. अनुच्छेद एवं कहानी लेखन (Paragraph & Story Writing):

* विषय १: मेरा प्रिय त्यौहार - दीपावली पर ५-८ पंक्तियों का एक सुंदर अनुच्छेद अपनी हिंदी की कॉपी में लिखिए.

* विषय २: मेरा जादू (Autumn Season) की खूबसूरत दृश्य का वर्णन करते हुए अपने शब्दों में अनुच्छेद ५-८ वाक्य लिखिए.

* विषय ३: किसी भी १० रोचक नैतिक शिक्षा से संबंधित कहानियों को अपने अभिभावकों की मदद से और उससे मिलने वाली सीख ५-८ पंक्तियों में लिखिए

MATHS

Subject: Mathematics

SECTION A: LONG-ANSWER TYPE QUESTIONS (5 QUESTIONS)

Q1. Community Grocery & Sanitation Budget (Chapter 7: The Cleanest City)

The Clean City Welfare Association of Green Park society bought cleaning and waste management supplies for their monthly sanitation drive:

* 15 big dustbins at ₹240 each

- * 8 brooms at ₹65 each
- * 12 bottles of disinfectant liquid at ₹115 each

Answer the following questions step-by-step:

- * a) Calculate the total amount spent on dustbins.
- * b) Calculate the total amount spent on brooms and disinfectant bottles combined.
- * c) What is the total budget spent by the welfare association for the sanitation drive?
- * d) If the association had a total budget of ₹6,000, how much money is left with them after purchasing all supplies?

Q2. Waste Collection Tally & Addition with Regrouping (Chapter 7: The Cleanest City)

During a week-long 'Cleanest Village Drive', students collected recyclable waste materials from different blocks of the village. The details are as follows:

- * Dry plastic waste: 4,385 grams
- * Waste paper and cardboard: 3,750 grams
- * Glass and metal waste: 1,865 grams

Answer the following:

- * a) What is the total weight of waste collected in grams?
- * b) Convert the total weight into kilograms (kg) and grams (g). (Hint: 1,000 g = 1 kg)
- * c) How many more grams of dry plastic waste were collected compared to glass and metal waste?

Q3. Weight Balances & Grams–Kilograms Conversion (Chapter 8: Weigh It, Pour It)

A local grocery store uses traditional beam balances and standard weights (1 kg, 500 g, 250 g, 100 g, 50 g).

- * a) Mention which combination of standard weights you will place on one side of the balance to weigh:
 - * i) 1 kg 750 g of flour
 - * ii) 2 kg 350 g of pulses
- * b) Convert the following total weights into grams:
 - * i) 3 kg 450 g = ___ g
 - * ii) 5 kg 80 g = ___ g
- * c) If a sack of potatoes weighs 8 kg 500 g and a sack of onions weighs 5 kg 750 g, find the total weight of both sacks combined.

Q4. Liquid Capacity Division & Bottle Packaging (Chapter 8: Weigh It, Pour It)

A dairy farm produces 18 Litres and 600 Millilitres of fresh milk every morning.

- * a) Convert the total milk produced into millilitres (mL). (Hint: 1 L = 1,000 mL)
- * b) The dairy farmer fills the milk into bottles of 500 mL capacity each. How many total full bottles can he prepare from the morning's milk?
- * c) If 12 Litres 250 Millilitres of milk is sold in the morning, how much milk is left at the dairy farm for the evening?

Q5. Water Leakage & Wastage Calculation (Chapter 8: Weigh It, Pour It)

A leaking tap in a school garden loses 250 mL of water every 1 hour.

- * a) How much water is wasted from the tap in 8 hours during school time?
- * b) How much water is wasted in 1 full day (24 hours)? Express your answer in Litres and Millilitres.
- * c) If a water tank holds 100 Litres of water, in how many days will the entire tank be emptied due to this continuous leak?

SECTION B: PROJECT-BASED & ACTIVITY QUESTIONS (5 QUESTIONS)

Q6. 3-Day Home Waste Audit & Tally Chart Project

Activity: Observe and record the recyclable waste generated at your home for 3 continuous days.

Task:

- * Create a table in your project book with columns: Day, Paper Waste (g/approx count), Plastic Waste (count/g), Wet Waste (g).
- * Draw a Tally Chart and a simple Bar Graph showing which category of waste was highest.
- * Write a 3-line suggestion on how your family can reduce plastic waste at home.

Q7. Kitchen Items Weight Balance & Prediction Table Activity

Activity: Collect 5 kitchen items (e.g., an apple, a pack of salt, a spoon, a mug, a small pouch of spices).

Q8. 1 Litre Capacity Calibration & Container Pouring Project

Activity: Take a 1-Litre empty plastic water bottle and a small 200 mL measuring cup or container.

Task:

- * How many full 200 mL cups are needed to fill the 1-Litre bottle completely?
- * Test other containers at home (e.g., a mug, a bowl, a small bucket). Estimate how many Litres or Millilitres each container holds, then measure using your 1-Litre bottle.
- * Record your findings in an observation table showing: Item Name, Estimated Capacity, Actual Capacity.

Q9. 'Clean City Market' Organic Rate Board & Problem Designing Poster

Activity: Design an A4 size poster for an 'Organic & Recycled Goods Market'.

Task:

- * Create a Rate Chart list with 4 eco-friendly products (e.g., Cloth Bags @ ₹35/piece, Organic Fertilizer @ ₹120/kg, Recycled Notebooks @ ₹45/book, Bamboo Pens @ ₹15/pen).
- * Frame 2 word problems based on your rate chart (e.g., 'Find the cost of 3 cloth bags and 2 notebooks'). Solve them step-by-step on the poster.

Q10. Home Drip Audit & Water Savings Campaign Poster

Activity: Check all taps, water pipes, and flush tanks in your home and bathroom for any drops leaking.

Task:

- * Put a measuring cup under a tap for 10 minutes to collect dripping water (if no tap drips, simulate a small drip).
- * Measure the volume collected in 10 minutes and calculate the water wasted in 1 hour and 1 day.
- * Draw a colorful awareness slogan poster on 'Save Every Drop - Weight & Volume Matters!'.

CLASS 5

TWAU

1. **Revision:** Complete thorough revision of Lessons 1 to 6.
2. **Paragraph Writing:** Write a short paragraph about the Andaman and Nicobar Islands.
3. **Map Work:** Locate the Seven Sister States of India on an outline map and write their capitals.
4. **Poster Creation:** Create a poster about a special natural place from Chapter 6 (e.g., Sundarbans or Western Ghats).
5. **Report Writing:** Write a report on a recent natural calamity or disaster in India.

English

- **Read, Think & Answer:** Write the importance of water storage and list five ways to save water at home or school.
- **Creative Work:** Make a poster with the slogan "SAVE WATER – EVERY DROP COUNTS!".
- **Water Storage Around Me:** Find two home/neighbourhood water storage places, draw/paste pictures, and write 3–4 sentences on each.
- **Water Detective:** Track daily water usage at home for brushing, bathing, washing utensils, cleaning, and gardening, and note down water-saving methods.

Hindi

गृहकार्य करने के निर्देश:

- * शुरू करने से पहले कक्षा में पढ़ी गई बचपन और यात्रा से जुड़ी बातों को याद कीजिए।
- * लिखने का काम अपनी हिंदी अभ्यास-पुस्तिका में कीजिए। तालिकाएँ इसी पत्रे पर भरिए। परिवार की मदद लीजिए, पर पहले स्वयं सोचिए।
- * दोहराइए और याद कीजिए (शब्द-भंडार)

* कार्य 1: मेरी शब्द-पोटली [15 मिनट]

- * इन शब्दों के अर्थ लिखिए और वाक्य बनाइए: पहर, चबेना, तमाशा, झुंड, महावत, दुर्लभ।
- * दशहरा-दीपावली की तैयारी में दिखने वाली 5 विशेषण-संज्ञा जोड़ियाँ लिखिए (उदा: रंग-बिरंगी रंगोली, मीठी जलेबी)।

* कार्य 2: शब्दों का खेल [15 मिनट] — सही समूहवाचक शब्द मिलाइए व वाक्य बनाइए:

(झुंड - हाथियों का | गुच्छा - अंगूरों का | भीड़ - लोगों की | छत्ता - मधुमक्खियों का | गट्टर - लकड़ियों का)

* एक शब्द लिखिए:

- * (क) देखने योग्य ____
- * (ख) प्रशंसा के योग्य ____
- * (ग) मीठा बोलने वाला ____
- * (घ) सप्ताह में एक बार होने वाला ____
- * (ङ) बड़ा भाई ____

ख. करके सीखिए (परिवार के साथ)

* कार्य 3: दादा-दादी के बचपन के खेल (साक्षात्कार) [25 मिनट]

* अपने दादा-दादी/नाना-नानी से उनके बचपन के खेलों के बारे में 4 प्रश्न पूछिए और 6-8 वाक्यों में "मेरे दादाजी/दादीजी का बचपन" शीर्षक से लिखिए। उनका बताया एक देसी खेल परिवार के साथ खेलकर चित्र बनाइए।

ग. सोचिए और रचिए (उच्च स्तरीय चिंतन • कोई एक चुनिए)

* कार्य 4: मेरी कलम से [20 मिनट] (कोई एक कार्य करें):

- * पत्र: मित्र को "मेरे शहर का दशहरा मेला" या अपनी किसी यात्रा के बारे में पत्र लिखिए।
- * कल्पना: "यदि मैं जंगल का एक सींग वाला गेंडा होता/होती..." — 8-10 वाक्य लिखिए।
- * सोचिए: जंगली जानवरों की संख्या क्यों घट रही है? वन्य-जीव सुरक्षा हेतु उपाय लिखिए।

घ. सीटी-एआई कोना

* कार्य 5: एल्गोरिथ्म [15 मिनट]: किसी देसी खेल के नियम 5-6 चरणों में क्रम से लिखिए (उदा: चरण 1: डंडा और गुल्ली लें)।

* कार्य 6: वर्गीकरण [10 मिनट]: शाकाहारी/मांसाहारी छाँटिए: (गेंडा, बाघ, हिरण, हाथी, उदबिलाव, जंगली भैंसा)।

ड. पढ़ने का आनंद

* कार्य 7: पठन-डायरी: प्रेमचंद की कहानी (जैसे: ईदगाह, दो बैलों की कथा) पढ़ें। अभ्यास-पुस्तिका में कहानी का नाम और प्रिय पात्र के बारे में 3-4 वाक्य लिखें।

स्व-आकलन (★ मुझे मदद चाहिए | ★★ मैं कर सकता/सकती हूँ | ★★★ मैं दूसरों को सिखा सकता/सकती हूँ)

मैं ...	मेरे तारे
पाठ को सही उच्चारण और ठहराव के साथ पढ़ सकता/सकती हूँ।	★ ★ ★ ★ ★
विशेषण और समूहवाचक शब्दों का सही प्रयोग कर सकता/सकती हूँ।	★ ★ ★ ★ ★
किसी बड़े से प्रश्न पूछकर उनकी बातें अपने शब्दों में लिख सकता/सकती हूँ।	★ ★ ★ ★ ★
अपने मित्र को पत्र लिख सकता/सकती हूँ।	★ ★ ★ ★ ★
किसी काम के निर्देश क्रम से लिख सकता/सकती हूँ।	★ ★ ★ ★ ★

Mathematical

• Section A (Long Answer Questions):

SECTION A: LONG ANSWER TYPE QUESTIONS (5 x 5 = 25 MARKS)

Q1. Dairy Farm Production & Multi-Step Calculations

A dairy farm in a village produces 1,250 liters of milk every day.

- * a) How many total liters of milk will the farm produce in the month of October (31 days)?
- * b) If 450 liters of milk are reserved daily for making cheese, how many liters are sold as liquid milk per day?
- * c) If liquid milk is sold at ₹48 per liter, how much money does the farm earn from liquid milk sales in one day?
- * d) Convert the total daily milk production (1,250 L) into milliliters (mL).

Q2. Coconut Farm Harvest & Packing Division

A farmer harvested coconuts from his orchard during the autumn season.

- * a) The orchard has 14 rows of coconut trees, and each row has 25 trees. How many total trees are in the orchard?
- * b) If each tree yields 18 coconuts during harvest, calculate the total number of coconuts harvested.
- * c) The farmer packs these coconuts into sacks holding 45 coconuts each. How many complete sacks can he pack?
- * d) How many coconuts will be left unpacked?

Q3. Autumn Festival Quilt Layout: Perimeter & Area

An artisan is designing a rectangular quilt for the fair. Length = 250 cm, Breadth = 180 cm.

- * a) Calculate the perimeter of the quilt in centimeters. | b) Convert the perimeter into meters.
- * c) Calculate the total area of the quilt in square centimeters (sq cm).
- * d) If decorative lace costs ₹12 per meter, calculate the total cost of lace required to trim all 4 edges.

Q4. Festival Celebration Pizza Fractions

During a family gathering, 3 large identical pizzas were ordered. Each pizza was divided into 12 equal slices.

- * a) Total number of slices across all 3 pizzas? | b) Children ate 14 slices, adults ate 16 slices. Fraction eaten in simplest form?
- * c) What fraction of total pizza was left unconsumed? | d) If each slice costs ₹35, find value of remaining slices.

Q5. Holiday Travel Schedule: Time Intervals & Speed

Rohan's family went on a road trip. They started journey at 6:30 AM and arrived at 2:15 PM.

- * a) Total travel time in hours and minutes? | b) Convert total travel duration completely into minutes.
- * c) They stopped 45 mins for breakfast and 30 mins for fuel. Actual driving time? | d) At 60 km/h avg speed, find total distance.

CLASS 6

Mathematics

1. Complete the Mid-term paper solution [cite: 7].
2. Write a summary of chapters 6, 7, 8, 9, and 10 [cite: 7].

English

1. Write a short paragraph (100–120 words) on 'How I Spent My Autumn Vacation' or 'My Favourite Autumn Festival (Dussehra/Diwali)'.
2. Learn and write 10 new English words with meanings and sentences from daily newspaper reading.
3. List 20 Verbs along with their 2nd and 3rd forms (e.g., Go – Went – Gone).

संस्कृतम्

'सः एष महान् चित्रकारः' पाठ तक के सभी प्रश्न-उत्तर अपनी संस्कृत गृहकार्य कॉपी में साफ-सुथरे अक्षरों में लिखकर लाइए।

Odia:

- କ)ଆମ ରାଜ୍ୟ ର ନାମ କ'ଣ ?
 ଖ) ଆମ ଦେଶର ନାମ କ'ଣ?
 ଗ)ଆମ ଜାତୀୟ ପତାକାଦର ବକବତାଟି ରଙ୍ଗ ଅଛି?
 ଘ)ଓଡ଼ିଶାର ରାଜଧାନୀର ନାମ କ'ଣ?
 ଙ)ତୁମ ବୈୟାଳୟର ନାମ କ'ଣ?

୨. ଶବ୍ଦ ଦେଖ ।

- କ) ପାଞ୍ଚଟି ଫୁଲର ନାମ
 ଖ)ପାଞ୍ଚଟି ଫଳର ନାମ ।
 ଗ)ପାଞ୍ଚଟି ପଶୁର ନାମ ।
 ଘ)ପାଞ୍ଚଟି ପକ୍ଷୀର ନାମ ।
 ଙ)ସାତଟି ଦିନର ନାମ ।
 ଟ)ବାରଟି ମାସର ନାମ

ବୟାକରଣ ।

- କ)ସ୍ବରବର୍ଣ୍ଣ ଓ ବୟଜନବର୍ଣ୍ଣଦେଖ ।
 ଖ) ଦଶଟି ଶବ୍ଦର ମାତ୍ରା ଚିହ୍ନ ଦିଅ ।
 ଗ)ପାଞ୍ଚଟିଯୁକ୍ତାକ୍ଷର ଦେଖ ।
 ଘ)ପାଞ୍ଚଟିବିପରୀତ ଶବ୍ଦ ଦେଖ ।
 ଙ)ପାଞ୍ଚଟିସମାଶକ ଶବ୍ଦ ଦେଖ ।

୪. ଅନୁଛେଦ ଲିଖ ।

ନିମନୋକ୍ତ ବର୍ଣ୍ଣରୁଦୟଦକୌଣସି ଦୁଇଟି ଉପରେ ୧୦ ଚିବାକୟ ଦେଖ ।

- କ) ମୋ ବିଦ୍ୟାଳୟ
 ଖ)ଦମା ଜନମଭୂମି
 ଗ)ଶରତ ଋତୁ
 ଘ) ମୋର ପ୍ରିୟ ଶିକ୍ଷକ

ହିନ୍ଦୀ

* पाठ 'जलाते चलो' तथा 'मेरी माँ' के सभी प्रश्न-उत्तर अपनी हिंदी की गृहकार्य कॉपी में साफ-सुथरे अक्षरों में लिखिए.

Science

• Part A (Activity-

Based): Temperature Detective (home thermometer reading), Compare Water Temperatures (cool, room-temperature, lukewarm water), Draw a laboratory thermometer, Choose the correct thermometer tool, Read/compare temperatures, and write safety precautions [cite: 7].

• Part B: 20 Multiple-Choice Questions (MCQs) on heat and temperature measurement units [cite: 7].

Social Science

Activities: Make a globe diagram and compare with maps, Map Detective (India map marking), History Timeline (Stone Age to Gupta Empire), Cultural Heritage festival table, Diversity collage/slogan, and Local Government (Gram Panchayat/Municipality study) [cite: 7].

CLASS-7

Maths

1. Mid-term paper solution

2. Write Summary of 2nd Book

English

1. Reading: Read any one English storybook and write a summary of the story in 100–120 words.
2. Writing: Write a paragraph in 100–120 words on “The Importance of Discipline in Student Life.”
3. Grammar: Write 10 sentences each using the simple present tense and the present continuous tense.
4. Vocabulary: Write 20 new English words with their meanings and use any 10 of them in sentences.

SST

1. Create a timeline of the important events from the chapter : The Age of Reorganisation.
2. Prepare a list of Gupta Dynasty rulers with a brief description.

Word Limit: 300 words

Hindi:

इमेज में लिखा हुआ टेक्स्ट नीचे दिया गया है:

1. संज्ञा, सर्वनाम, विशेषण (5-5 उदाहरण)

अपने घर की 5 चीजों के नाम लिखो और बताओ वो कौन सी संज्ञा है।

जैसे - मेज - जातिवाचक संज्ञा

2. विलोम शब्द - 20 शब्द

दिन - रात, हार - जीत, ऐसे 20 शब्द लिखो और याद करो।

3. पर्यायवाची शब्द - 15 शब्द

पानी - जल, नीर, वारि

पेड़ - वृक्ष, तरु

ऐसे 15 शब्दों के 2-2 पर्यायवाची लिखो।

4. मुहावरे - 10 मुहावरे

मुहावरा लिखो, अर्थ लिखो और वाक्य बनाओ।

जैसे - नाक में दम करना - बहुत परेशान करना।

5. अशुद्ध - शुद्ध - 20 शब्द

अशुद्ध शब्द को शुद्ध करो।

जैसे - अध्दन - अध्ययन, सुरज - सूरज

SANSKRIT

सेवा हि परमो धर्मः इति पाठात् क्रीडामो वयम् श्लोकान्त्याक्षरी इति पाठपर्यन्तं सर्वान् प्रश्नोत्तरान् स्वगृहकार्यपुस्तिकायां लिखित्वा आनयन्तु।

CLASS 8

Science

1. Write 10 lines on 'How COVID-19 taught us importance of microorganisms'
2. Collect 5 samples of natural and synthetic fibres and paste them on A4 sheet
3. Draw a labelled diagram of human eye and explain].

Hindi

निम्नलिखित पाठों के सभी प्रश्न-उत्तर अपनी हिंदी की गृहकार्य कॉपी में साफ-सुथरे अक्षरों में लिखिए।

- * कबीर के दोहे
- * एक टोकरी भर मिट्टी
- * मत बाँधो

SANSKRIT

गीता सुगीता कर्तव्या तथा डिजिटभारतम् - युगपरिवर्तनम् पाठस्य सर्वान् प्रश्नोत्तरान् स्वगृहकार्यपुस्तिकायां लिखिवा आनयन्तु।

Social Studies (SST)

1. Create a timeline of important events from the chapter: The Colonial Era in India
2. Highlight any five specialty of the seven continents from CH-2.1 World Geography – Some Glimpses (Word Limit: 300 words)

English

1. Writing: Essay in 150–180 words on 'The Role of Students in Making India Clean and Green'
2. Grammar: Prepare 10 sentences each using modals and subject–verb agreement. Underline modals and subjects
3. Vocabulary: Write 25 new English words with meanings, synonyms and antonyms
4. Diary Entry: Write a diary entry describing how you spent a memorable day during autumn break (100–120 words).

Mathematics

- Chapter 1: Proportional Reasoning — Direct proportion problems (car speed/distance), Daily life proportional reasoning (notebook costs), Ratio comparison (Class A vs Class B pass percentage), Inverse proportion (workers & days), Recipe scaling for 10 people .
- Chapter 2: We Distribute Yet Things Multiply — Distributive property simplifications, Algebraic expansions, Geometry area calculations, Algebraic identities .

CLASS 9

ARTIFICIAL INTELLIGENCE

1. AI in Daily Life: Identify 5 everyday AI applications and explain how they work.
2. Creative Activity: Design a colourful poster on 'Responsible and Ethical Use of Artificial Intelligence'
3. Case Study: Choose a real-life problem and explain how AI helps solve it using the five stages of the AI Project Cycle.

SOCIAL STUDIES

1. Prepare a mind map of chapter CH5: State and Society upto 1000 CE.
2. Present a student's own brief strategy to score maximum marks in Social Studies.

ENGLISH

1. Write a descriptive paragraph (100–120 words) on 'The Importance of Discipline in Student Life'.
2. Read a newspaper article/story and write a 100–120 word summary.
3. Write a diary entry about a memorable day during the autumn break.

हिंदी

- * उपसर्ग - प्रत्यय
 - * क) 10 उपसर्ग से 2-2 शब्द बनाओ - अ, अनु, अधि, अप, अभि, नि, प्र, परि, सु, उत्
 - * ख) 10 प्रत्यय से शब्द बनाओ - आई, आहट, ई, वाला, पन, त्व, ता, इक, मान, वान
- * समास
 - * क) समास विग्रह करके भेद बताओ - 15 शब्द: महादेव, नीलकंठ, राजपूत, चतुर्भुज, यथाशक्ति, दशानन, पीतांबर, त्रिलोचन, गजानन, माता-पिता, दिन-रात, कमलनयन, घनश्याम, चंद्रमुखी, आजीवन
 - * अर्थ के आधार पर वाक्य भेद
 - * इन वाक्यों को विधानवाचक, प्रश्नवाचक, आज्ञावाचक, विस्मयादिबोधक में बदलो - 10 वाक्य
- * अलंकार
 - * क) अनुप्रास, यमक, श्लेष, उपमा के 3-3 उदाहरण लिखो।
- * अनुस्वार - अनुनासिक
 - * क) 20 शब्दों में अनुस्वार और अनुनासिक का सही प्रयोग करो - जैसे - हँसी - हंसी
- * लेखन कार्य
 - * क) दशहरा पर 100 शब्दों में अनुच्छेद
 - * ख) अपने मित्र को दशहरा की छुट्टियों में आने का निमंत्रण पत्र लिखो।
 - * ग) अशुद्ध वाक्यों को शुद्ध करो - 10 वाक्य
 - * नोट - सारा काम व्याकरण की कॉपी में साफ-साफ लिखना है।

SANSKRIT

- * पठ, लिख, कृ, दृश् धातूनां लट्-लकारस्य, लङ्-लकारस्य, लृट्-लकारस्य च रूपाणि लिखिवा स्मरन्तु।
- * राम, हरि, रमा, अस्मद् शब्दानां कृ रूपाणि लिखिवा स्मरन्तु।

Mathematics (8-Day Holiday Plan)

- Day 1: Chapter 1 - Coordinates (Plotting points, rectangle/triangle vertices, reflections).
- Day 2: Chapter 2 - Linear Polynomials (Zeroes, equations, graph plotting) .
- Day 3: Chapter 3 - The World of Numbers (Rational/irrational, recurring decimals to p/q, surds/rationalisation).
- Day 4: Chapter 4 - Algebraic Identities (Expansions, evaluations, $x^2 + 1/x^2$, cubic factorisation).
- Day 5: Chapter 5 - Circles (Definitions, chord distance, central/inscribed angles).
- Day 6: Chapter 6 - Perimeter and Area (Rectangle, Heron's formula, circle area, pathway costs).
- Day 7: Chapter 7 - Probability (Experimental & theoretical probabilities with coins, dice, and urns).
- Day 8: Chapter 8 - Sequences & Progressions (Sequences, AP 20th term, sum, and savings word problems) .

Science

- Biology: Make a science magazine (2–4 pages) on a sustainable future .

- Chemistry: Describe atomic models (Dalton to Bohr) and subatomic particles (electron, proton, neutron with discoverers, relative charges, locations).
- Physics: Toy car average speed activity/data table, motion data analysis, and application-based questions on Newton's laws of motion, acceleration, and inertia

ଓଡ଼ିଆ

କାର୍ଯ୍ୟ – ୧: ପ୍ରବନ୍ଧ ରଚନା

ଦ୍ଵିମୂଲିଭୂତ ବିଷୟଗୁଡ଼ିକ ସ୍ୱାଧୀନ ଯର୍ଯ୍ୟକୌଣସି ଦୁଇଟି ବିଷୟର ପ୍ରବନ୍ଧ ଯଲଖ।

୧. ପରିଯବଣ ସୁରକ୍ଷା ୨. ଛାତ୍ର ଜୀବନଯର ଶୃଙ୍ଖଳାର ସୂତ୍ର ୩. ଯମ୍ାର ପରିୟ ରତ୍ର ୪. ମ୍ାତୃଭାଷାର ସୂତ୍ର

କାର୍ଯ୍ୟ – ୨: ପତ୍ର ଲିଖନ

୧. ତୁମ୍ ବିଦୟାଳୟର ପ୍ରଧାନଶିକ୍ଷକଙ୍କୁ ଡିଡି ଡିନ ଛୁଡି ପାଇଁ ଦରଖାସ୍ତ ଯଲଖ। ୨. ତୁମ୍ ବନ୍ଧୁଙ୍କୁ ଶରତ ଛୁଡି କିପରି କଟାଇଲ, ତାହା ଜଣାଇ ଏକ ପତ୍ର ଯଲଖ।

୪. ଦ୍ଵିମୂଲିଭୂତ ଶବ୍ଦଗୁଡ଼ିକର ବିପରୀତ ଶବ୍ଦ ଯଲଖ: ଆୟଲାକ, ସୁଖ, ଭବ୍ଡି,

କାର୍ଯ୍ୟ – ୪: ସାହି ତୟ

୧. ତୁମ୍ ଓଡ଼ିଆ ପାଠ୍ୟପୁସ୍ତକଯର ପଢିଥିବା ଯର୍ଯ୍ୟକୌଣସି ଯଗାଡିଏ ଗଦୟ ପାଠ ସାରାଂଶ ଯଲଖ। ୨. ଯର୍ଯ୍ୟକୌଣସି ଯଗାଡିଏ କବିତାର ମ୍ଲଭାବ ଯଲଖ। ୩. ତୁମ୍ ପରିୟ ଯଲଖକ ବା କବିଙ୍କ ଜୀବନୀ ସାଂଯକ୍ଷପଯର ଯଲଖ।

କାର୍ଯ୍ୟ – ୫: ସୂଜନାତ୍ମକ କାର୍ଯ୍ୟ

୧. ଓଡ଼ିଆ ଭାଷାର ସୂତ୍ର ବିଷୟଯର ୧୫୦–୨୦୦ ଶବ୍ଦର ଏକ ଅନୁଯେଦ ଯଲଖ। ୨. ଯବୈଡିକ ଖବରକାଗଜରୁ ଯର୍ଯ୍ୟକୌଣସି ଯଗାଡିଏ ଓଡ଼ିଆ ଖବର ସାଂଗ୍ରହ କରି ଖାତାଯର ଯଲ

CLASS 10

MATHS:

1. Draw the graphs of the following pair of linear equations.

a) $3x + 4y = 7$; $2x - 3y = -1$

b) $2x + 3y = 5$; $4x + 6y = 12$

c) $2x + 3y = 5$; $4x + 6y = 10$

2. Sum of the first 'n' natural numbers

3. To prove the length of the tangents drawn from an external point to a given circle are equal

4. Draw any figure on graph sheet and locate 10 different points on it.

5. Basic proportionality theorem

6. Re-solve your Periodic Test (PT2) question paper

SST

Prepare a short Summary of the chapter H-4: The Age of Industrialisation.

Make 2 MCQs and 1 Short Answer Questions from the Chapter H-4: The Age of Industrialisation according to roll numbers:

Roll No. 1 to 6: Before the Industrial Revolution

Roll No. 7 to 12: Hand Labour and Steam Power

Roll No. 13 to 18: Industrialisation in the colonies

Roll No. 19 to 24: Factories Come Up

Roll No. 25 to 30: The Peculiarities of Industrial Growth

HINDI GRAMMAR

*1. पदबंध -

पदबंध का भेद बताओ -

क) दशरथ के पुत्र राम ने रावण को मारा।

ख) वह बहुत तेजी से दौड़ रहा है।

ग) परिश्रम करने वाला छात्र सफल होता है।

घ) वह घर से बाहर गया।

ङ) नीले आकाश में पक्षी उड़ रहे हैं।

ऐसे 15 वाक्य अपनी किताब से ढूंढ कर लिखो।

*2. रचना के आधार पर वाक्य भेद -

सरल, संयुक्त, मिश्र वाक्य में बदलो - 15 वाक्य

जैसे - 1. वह बीमार है इसलिए स्कूल नहीं आया। (संयुक्त वाक्य)

*3. समास -

समास विग्रह + भेद - 20 शब्द

नीलकंठ, महात्मा, यथाशक्ति, त्रिभुज, राजपुत्र, माता-पिता, चौराहा, घुड़सवार, कमलनयन, भरपेट, आजीवन, नीलगाय, दशानन, चंद्रमुख, गजानन, विद्यालय, देशभक्ति, लंबोदर, पथभ्रष्ट, हररोज

*4. मुहावरे -

20 मुहावरे - अर्थ और वाक्य प्रयोग

जैसे - आँखों का तारा, ईद का चाँद, नाक में दम करना, नौ दो ग्यारह होना

*5. लेखन कार्य -

क) अनुच्छेद - 120 शब्द - "मेरा प्रिय त्योहार दशहरा" / "डिजिटल इंडिया"

ख) पत्र - अपने छोटे भाई को मोबाइल का सदुपयोग बताते हुए पत्र।

ग) सूचना लेखन - आपके स्कूल में दशहरा मेले का आयोजन है।

संस्कृतम्

अस्मद् तथा युष्मद् शब्दयोः रूपाणि लिखित्वा स्मरन्तु।

प्रथमपाठात् सप्तमपाठपर्यन्तं सर्वान् प्रश्नोत्तरान् स्वगृहकार्यपुस्तिकायां लिखित्वा आनयन्तु।

ARTIFICIAL INTELLIGENCE

1. What is Artificial Intelligence? Explain its domain.
2. The world around us is filled with various applications of AI. Write 5-5 examples of each domain of AI being used by us in real life.
3. What is AI Project Cycle? Explain its various stages.
4. What are Ethical Frameworks? Why do we need Ethical Frameworks for AI?
5. What is the difference between classification and regression model? Explain with graph.
6. What is the difference between clustering and association model? Explain with graph.
7. How grey scale images are different from RGB images?
8. How Script bot and smart bot are different from each other?

9. What is confusion matrix? Define the terms ACCuracy, Precision, Recall and F1 score with their formulas.
10. Explain the following : Supervised, Unsupervised and Reinforcement Learning.
11. What is Artificial Neural Network? Draw its diagram. Write any 4 Features of ANN.
12. Explain the following:
 - Train-test split
 - Needs of Train-test split
 - Accuracy
 - Error

CLASS 11 COMMERCE

BUSINESS STUDIES

1. It is said to be an artificial person created by law, having a separate entity with perpetual succession and a common seal.

(a) Identify the form of business organisation.

(b) Explain the features of the form of business organisation identified above.

2. Monica Khanna is a jewellery designer. She started her career from scratch and took an advanced designing course in jewellery product development. On completion of the course, she

got a job at Gitanjali Gems.

(i) Identify the type of economic activity Monica is engaged in.

(ii) State two features of the above type of economic activity.

3. Explain the characteristics of business.

4. What are the advantages of public sector enterprises?

5. What are the basic principles of insurance? Explain in detail.

6. Explain the responsibilities of business towards the interested groups.

7. Define business ethics. What is the importance of business ethics?

8. What are the demerits of sole proprietorship?

9. Define partnership deed. What does it contain?

10. What is the importance of multinational companies

ACCOUNTANCY:

1. Define GAAP.

2. What do you mean by Accounting cycle?

3. Define GST.

4. Explain the following terms – Assets; voucher; profit and expenditure.

5. Distinguish between journal and ledger.

6. Define BRS.

7. What do you mean by Depreciation?

8. What are the causes of depreciation?

9. From the following particular pass the journal entry –
- Business started with cash – 20000 & building – 100000
 - Deposited in Bank – 10000
 - Purchased from harish – 5000
 - Purchase goods for cash – 7000
 - Sold goods to mohan for cash 8000
 - Salary paid to employees -15000
 - Purchased machinery and paid installation – 100000 & 20000
 - Provide depreciation 5% on machinery
 - Good returned to harish – 2000
 - Paid cartage -500

10. Distinguish between cash book and cash a/c.
11. What do you mean by overdraft balance of passbook?
12. What are the advantages of WDV method?
13. Explain the following terms – materiality concept

Objectivity concept

14. What do you mean by Residual value.
15. Explain the qualitative characteristics of accounting information

ECONOMICS

- Explain the percentage method of determining elasticity of demand with the help of an example.
- Explain the law of demand with the help of an imaginary schedule and diagram.
- Define demand. Explain any 4 factors that affect demand for a commodity.
- Using Indifference curves approach, explain the conditions of consumer's equilibrium.
- Explain the conditions of consumer's equilibrium in case of (i) Single commodity and (ii) two commodities. Use utility approach.
- Explain the relationship between TU and MU.
- "An economy always produces, but not inside, a PPF", Defend or refute.
- Explain the central problems of an economy.
- What is the meaning of sampling method? Explain the Random and Non Random sampling methods.
- Discuss the two principles of sampling.
- Explain the mathematical properties of Arithmetic mean.

HINDI

- अभिव्यक्ति और माध्यम -

- *1. जनसंचार के माध्यम - (10 Marks)
- * क) जनसंचार क्या है? उसके कार्य लखो।
- ख) प्रिंट माध्यम, रेडियो, टीवी, इंटरनेट पर 100-100 शब्दों में टिप्पणी लखो।
- ग) 5-5 शब्द - प्रिंट, रेडियो और टीवी की भाषा की विशेषताएँ।
- *2. पत्रकारता -

- क) संपादकीय क्या होता है? एक काल्पनिक संपादकीय लखो - विषय "सोशल मीडिया का युवा पर प्रभाव"
- ख) साक्षात्कार - अपने मोहल्ले के किसी सफल व्यक्ति का साक्षात्कार लो - 10 प्रश्न तैयार करो।
- ग) फीचर और समाचार में अंतर - सारणी बनाओ। *3. रचनात्मक लेखन -
- क) डायरी लेखन - दशहरा की छुट्टी का एक दिन - डायरी में लिखो।
- ख) आपके स्कूल में कब सम्मेलन हुआ, उसका प्रतिवेदन (रिपोर्ट) लिखो - 150 शब्द।
- ग) नारे लेखन - 5 विषयों पर - जल बचाओ, स्वच्छता, वोट डालो।

*Note: सारा काम A4 file में Project की तरह बनाना है।

INFORMATICS PRACTICES

All 10 Python programs with full code:

1. Area of circle & rectangle
2. Even/Odd
3. Largest of 3 numbers
4. Simple calculator (+ - * /)
5. Leap year
6. Multiplication table
7. Factorial
8. Count vowels
9. Largest/smallest in list
10. Student marks average.

CLASS 11 SCIENCE

CHEMISTRY

- Complete the chapter notes and exercise upto chapter 5
- Solve NCERT EXEMPLAR questions upto chapter 5

BIOLOGY

- Draw labelled diagrams of Human heart, Human brain, Excretory system in Human.

HINDI

अभिव्यक्ति और माध्यम -

1. जनसंचार के माध्यम - (10 Marks)

क) जनसंचार क्या है? उसके कार्य लिखो।

ख) प्रिंट माध्यम, रेडियो, टीवी, इंटरनेट पर 100-100 शब्दों में टिप्पणी लिखो।

ग) 5-5 शब्द - प्रिंट, रेडियो और टीवी की भाषा की विशेषताएँ।

*2. पत्रकारिता -

क) संपादकीय क्या होता है? एक काल्पनिक संपादकीय लिखो - विषय "सोशल मीडिया का युवा पर प्रभाव"

ख) साक्षात्कार - अपने मोहल्ले के किसी सफल व्यक्तिका साक्षात्कार लो - 10 प्रश्न तैयार करो।

ग) फीचर और समाचार में अंतर - सारणी बनाओ।

*3. रचनात्मक लेखन -

क) डायरी लेखन - दशहरा की छुट्टी का एक दिन - डायरी में लिखो।

ख) आपके स्कूल में कब सम्मेलन हुआ, उसका प्रतिवेदन (रिपोर्ट) लिखो - 150 शब्द।

ग) नारे लेखन - 5 विषयों पर - जल बचाओ, स्वच्छता, वोट डालो।

Note: सारा काम A4 file में Project की तरह बनाना है।

MATHEMATICS

Relations and Functions

Q1. Let $A = \{1, 2, 3\}$ and $B = \{2, 4, 6, 8\}$. Define a relation R from A to B by $y = 2x$.

- * (a) Write R as a set of ordered pairs.**
- * (b) Find the domain and range of R .**
- * (c) Find $A \times B$ and state its number of elements.**

Trigonometric Functions

Q2. Prove that $(\sin 3x + \sin x)/(\cos 3x + \cos x) = \tan 2x$, wherever the expressions are defined.

Complex Numbers and Quadratic Equations

Q3. Solve the equation $x^2 - 4x + 13 = 0$. Express the roots in the form $a + ib$, and verify the sum and product of the roots.

Linear Inequalities

Q4. Solve the following system of inequalities and represent the solution on the number line:

Permutations and Combinations

Q5. A committee of 4 students is to be selected from 6 boys and 5 girls. Find the number of ways of selecting the committee if:

- * (a) there is no restriction,**
- * (b) exactly 2 girls are selected, and**
- * (c) at least 1 girl is selected.**

Binomial Theorem

Q6. Expand $(2x - 3)^5$ using the binomial theorem. Hence, find the coefficient of x^3 .

Sequences and Series

Q7. The 4th term of a G.P. is 24 and the 7th term is 192. Find:

- * (a) the first term and common ratio,**
- * (b) the 10th term, and**
- * (c) the sum of the first 10 terms.**

Straight Lines

Q8. Find the equation of the straight line passing through $(2, -3)$ and perpendicular to the line $3x + 4y - 5 = 0$. Express your answer in general form.

Q9. Find the equation of the straight line passing through the intersection of $2x + 3y - 7 = 0$ and $x - y + 1 = 0$, and parallel to the line $3x - 2y + 5 = 0$.

Q10. Find the equation of a straight line whose x-intercept is 4 and y-intercept is 3. Also find its slope and the length of the perpendicular from the origin to the line.

COMPUTER SCIENCE

Python Program:

1. Write a python program to find the largest and smallest of three numbers.
2. Write a python program to print this pattern.
4321
432
43
4
3. Write a python program to check whether a number is an Armstrong number or not.
4. Write a python program to check whether a number is a palindrome or not.
5. Write a python program to generate the Fibonacci series.
6. Write a python program to calculate the GCD and LCM of two integers.
7. Write a python program to count vowels, consonants, uppercase and lowercase letters in a string.
8. Write a python program to find the largest and smallest elements in a list.
9. Write a python program to store student roll numbers, names and marks in a dictionary; Display students scoring above 75.
10. Write a python program to print the below pattern.

```
*  
**  
***  
****  
*****
```

CLASS 12 SCIENCE

COMPUTER SCIENCE

Python Programs

1. Write a python program to create a menu-driven program using user-defined functions add(), multiply(), subtract() and divide() to implement calculator.
2. Write a python program to read a text file demo.txt and display each word separated by #
3. Write a python program to read a text file sample.txt and count vowels, consonants, uppercase and lowercase characters in a text file
4. Write a python program to copy lines from f1.txt that do not contain the letter 'a' into another file f2.txt.
5. Write a python program to create a binary file student.dat containing student names and roll numbers, then search by roll number.
6. Write a python program to create a binary file student.dat of student records and update marks for a given roll number.
7. Write a python program to create a CSV file users.csv of user IDs and passwords, then search for a user ID.
8. Write a python program to implement a stack using a list with push, pop and display operations.

9. Write a python program to generate random numbers from 1 to 6 to simulate a dice.

10. Write a python program to create a function to calculate the factorial of a number.

BIOLOGY

- Prepare mind maps of Chapter- 6 (Evolution) Chapter -7 (Human health and diseases) and Chapter-8 (Microbes in human welfare).

PHYSICS

NUMERICAL PRACTICE WORKSHEET

Instructions: Attempt all questions. Show the formula, substitution, calculation and SI unit. Use standard physical constants where required.

Note: These are original board-exam-style practice questions based on common Class 12 Physics topics, not a verbatim collection of verified past-paper questions.

Chapter 1: Electric Charges and Fields

1. A point charge of $5\ \mu\text{C}$ is placed in air. Calculate the electric field intensity at a point 20 cm away from it. (Take $k = 9 \times 10^9\ \text{N m}^2\ \text{C}^{-2}$.)
2. Two point charges $+2\ \mu\text{C}$ and $+8\ \mu\text{C}$ are separated by 30 cm in air. Find the magnitude of the electrostatic force between them.
3. A charge of $4\ \mu\text{C}$ is placed at the centre of a cube. Calculate the total electric flux through the cube. (Take $\epsilon_0 = 8.85 \times 10^{-12}\ \text{C}^2\ \text{N}^{-1}\ \text{m}^{-2}$.)

Chapter 2: Electrostatic Potential and Capacitance

1. Calculate the electric potential at a point 15 cm from a point charge of $+6\ \mu\text{C}$ in air. Take $k = 9 \times 10^9\ \text{N m}^2\ \text{C}^{-2}$.
2. A $4\ \mu\text{F}$ capacitor is connected to a 12 V battery. Calculate the charge stored and the energy stored in the capacitor.
3. Capacitors of $3\ \mu\text{F}$ and $6\ \mu\text{F}$ are connected (a) in series and (b) in parallel. Find the equivalent capacitance in each case.

Chapter 3: Current Electricity

1. A wire of resistance $8\ \Omega$ carries a current of 1.5 A. Calculate the potential difference across it and the power dissipated.
2. A copper wire 2 m long has cross-sectional area $1.0 \times 10^{-6}\ \text{m}^2$ and resistivity $1.7 \times 10^{-8}\ \Omega\ \text{m}$. Calculate its resistance.
3. Three resistors of $2\ \Omega$, $3\ \Omega$ and $6\ \Omega$ are connected in parallel across a 6 V battery. Calculate the equivalent resistance and total current.

Chapter 4: Moving Charges and Magnetism

1. A charge of $2\ \mu\text{C}$ moves at $3 \times 10^5\ \text{m s}^{-1}$ perpendicular to a magnetic field of 0.4 T. Calculate the magnetic force on it.
2. A straight wire of length 0.5 m carries a current of 4 A perpendicular to a magnetic field of 0.2 T. Find the magnetic force on the wire.

3. A circular coil has 50 turns, radius 10 cm and carries a current of 2 A. Calculate its magnetic dipole moment.

Chapter 5: Magnetism and Matter

1. A magnetic dipole of moment 0.8 A m^2 is placed in a uniform magnetic field of 0.25 T at an angle of 30° to the field. Calculate the magnitude of the torque.
2. A bar magnet has magnetic dipole moment 1.2 A m^2 and is placed in a 0.5 T field. Calculate its maximum potential-energy magnitude.
3. A magnetic material has magnetic susceptibility 0.004 . Calculate its relative permeability, assuming $\mu_r = 1 + \chi_m$.

Chapter 6: Electromagnetic Induction

1. The magnetic flux through each turn of a 100-turn coil changes from $5 \times 10^{-3} \text{ Wb}$ to $1 \times 10^{-3} \text{ Wb}$ in 0.02 s . Calculate the magnitude of the induced emf.
2. A coil of inductance 0.5 H carries a current that changes from 2 A to 8 A in 0.3 s . Find the magnitude of the induced emf.
3. A conducting rod of length 0.4 m moves at 5 m s^{-1} perpendicular to a magnetic field of 0.6 T . Calculate the motional emf.

Chapter 7: Alternating Current

1. An AC source has peak voltage 311 V . Calculate its rms voltage.
2. A 100Ω resistor is connected to a 220 V rms AC supply. Calculate the rms current and average power consumed.
3. A series AC circuit has resistance 30Ω and inductive reactance 40Ω . Calculate its impedance and power factor.

Chapter 8: Electromagnetic Waves

1. An electromagnetic wave has frequency 100 MHz . Calculate its wavelength in vacuum. (Take $c = 3 \times 10^8 \text{ m s}^{-1}$).
2. The electric-field amplitude of an electromagnetic wave is 120 V m^{-1} . Calculate the magnetic-field amplitude. (Take $c = 3 \times 10^8 \text{ m s}^{-1}$.)
3. An electromagnetic wave travels through vacuum with wavelength 600 nm . Calculate its frequency.

Chapter 9: Ray Optics and Optical Instruments

1. An object is placed 30 cm in front of a convex lens of focal length 20 cm . Find the image distance and magnification using the Cartesian sign convention.
2. A concave mirror has focal length 15 cm . An object is placed 30 cm in front of it. Calculate the image distance and magnification.
3. The critical angle of a transparent material in air is 45° . Calculate the refractive index of the material. Take the refractive index of air as 1.

***अभिव्यक्ति और माध्यम -**

***1. जनसंचार माध्यम -**

क) जनसंचार के प्रमुख माध्यम कौन-कौन से हैं? उनके फायदे और नुकसान सारणी में लिखो।

ख) इंटरनेट पत्रकारिता क्या है? उसके 5 गुण और 5 दोष लिखो।

ग) सोशल मीडिया ने पत्रकारिता को कैसे बदला है? - 150 शब्दों में अपने विचार लिखो।

***2. पत्रकारिता के प्रकार और लेखन -**

क) संपादकीय लेखन - विषय पर 200 शब्द का संपादकीय लिखो -

"क्या सोशल मीडिया युवाओं को भटका रहा है?"

ख) फीचर लेखन - "मेरे गाँव का दशहरा मेला" पर 200 शब्द का फीचर लिखो।

ग) आलेख लेखन - "बढ़ती महंगाई" पर आलेख।

घ) समाचार लेखन - आपके शहर में सड़क दुर्घटना हुई, उसका उल्टा पिरामिड शैली में समाचार लिखो।

***3. सृजनात्मक लेखन**

क) आपके विद्यालय में वृक्षारोपण कार्यक्रम हुआ, उसका प्रतिवेदन (रिपोर्ट) लिखो।

ख) "कैसे बनता है रेडियो नाटक" - इस विषय पर 150 शब्द लिखो।

ग) टीवी समाचार एंकर की भाषा कैसी होनी चाहिए? 10 बिंदु लिखो।

***4. Project Work -**

एक File तैयार करो -

पहले पेज पर - 5 अलग-अलग अखबारों की कटिंग चिपकाओ और बताओ कौन सा समाचार, कौन सा संपादकीय, कौन सा फीचर है।

दूसरे पेज पर - 2 विज्ञापनों की कटिंग चिपकाओ और उसकी भाषा की विशेषता लिखो।

Note: सारा काम सुंदर लिखावट में करना है, यही Internal Assessment में जुड़ेगा।

Mathematics:

INTEGRALS

Part 1: Questions 1-11

7. Integrate the function

$$\int \cos(x + a) / \sin(x + b) dx$$

Evaluate: $\int \sin(x - a) / \sin(x + a) dx$

8. Evaluate

$$\int [\tan^2 x \cdot \sec^2 x / (1 - \tan^2 x)] dx$$

9. Find

$$\int dx / \sqrt{3 - 2x - x^2}$$

10. Find

$$\int x^2 / (x^4 + x^2 - 2) dx$$

5. Find

$$\int x^4 / [(x - 1)(x^2 + 1)] dx$$

6. Find

$$\int [(x - 5) / (x - 3)^3] e^x dx$$

7. Find

$$\int \text{from } \pi/3 \text{ to } \pi/2 \quad e^x [(1 + \sin x) / (1 + \cos x)] dx$$

8. Find

$$\int [2 \sin 2x / (1 + \cos 2x)] e^x dx$$

9. Find

$$\int e^{2x} \sin(3x + 1) dx$$

10. If

Find the value of a.

$$\int \text{from } 0 \text{ to } a \quad dx / (4 + x^2) = \pi/8$$

11.

$$\int \text{from } 0 \text{ to } \pi/2 \quad dx / (1 + e^{(\sin x)})$$

Part 2: Questions 12–23

12. Evaluate

$$\int \text{from } 0 \text{ to } \pi \frac{e^{\cos x}}{[e^{\cos x} + e^{-\cos x}]} dx$$

13. Find

$$\int \text{from } 0 \text{ to } \pi/4 \frac{dx}{[\cos^2 x \sqrt{2 \sin 2x}]}$$

14. Find

$$(1/2) \int (1 + t^2) / t^2 dt$$

15. Find

$$\int \text{from } 0 \text{ to } \pi/4 \frac{(\sin x + \cos x)}{(9 + 16 \sin 2x)} dx$$

16. Find

$$\int \text{from } \pi/6 \text{ to } \pi/3 \frac{(\sin x + \cos x)}{\sqrt{\sin 2x}} dx$$

17. Find

$$\int dx / (\cos x \cdot \cos 2x)$$

18. Evaluate

$$\int \text{from } -1 \text{ to } 2 |x^2 - x| dx$$

19. Evaluate

$$\int \text{from } 0 \text{ to } \pi/2 |x \cos \pi x| dx$$

20. Evaluate

$$\int \text{from } 0 \text{ to } \pi/2 |x \sin \pi x| dx$$

21. Evaluate

$$\int \text{from } 0 \text{ to } \pi/2 \sin 2x \cdot \cos 3x dx$$

22. Given

$$dF(x)/dx = 1 / \sqrt{2x - x^2}$$

and $F(1) = 0$, find $F(x)$.

23. Evaluate

$$\int \text{from } 0 \text{ to } \pi/4 \frac{dx}{(\sin x + \cos x)}$$