HOLIDAY HOMEWORK

SUMMER VACATION

CLASS – IX

SOCIAL SCIENCE

1. Map work (Label and locate states and union territories with their capitals on India Map and paste in your notebook)
2. Write about on a local historical place nearby you.
3. Write a paragraph on World Environment Day (5 June).
4. “Democracy is considered better than other forms of government.” Justify the Statement.
5. Explain the scope of Social Science by describing Geography, History, Political Science, and Economics, and show how they overlap in real life.
6. Write about the features of democracy.
7. Explain the major causes of floods in India and suggest effective flood management Measures.
8. Describe the major seasons of India and explain the climatic conditions associated With each season.
9. What are the main functions of the Election Commission of India?
10. What are the challenges to free and fair elections in India?
11. Write the Fundamental Rights and Fundamental Duties of the Indian Constitution.
12. Write and learn the ‘Preamble’ of the Indian Constitution.
13. Read the chapter throguhly: The Dynamic Atmosphere and changing climate.
    - Write 20 MCQ/ very short answer in your no

पीएम श्री केन्द्रीय विद्यालय क्रमांक 1 भारतीय प्रौद्योगिकी संस्थान खड़गपुर

📚 कक्षा 9वीं हिंदी (गंगा) **ग्रीष्मकालीन गृह कार्य** **🌞 40 दिनों का**

📌 सामान्य निर्देश:	🎯 विशेष निर्देश	☆ मूल्यांकन आधार
साफ-सुथरी लिखावट रखें अलग कॉपी में कार्य करें रचनात्मकता का उपयोग करें	चित्र, चार्ट और रंगों का उपयोग करें प्रत्येक कार्य में तिथि अवश्य लिखें कार्य को क्रमबद्ध एवं आकर्षक बनाएं	प्रस्तुति (Presentation) रचनात्मकता (Creativity) भाषा शुद्धता (Language Accuracy) समय पर पूर्णता (Completion) प्रस्तुति (Presentation)

🗓️ पहले 8 दिन – पठन एवं समझ (Reading & Understanding)

1. प्रतिदिन एक पाठ पढ़ें
2. कठिन शब्दों की सूची बनाएं (10 शब्द रोज़)
3. प्रत्येक पाठ का सार (80–100 शब्दों में) लिखें
4. पाठ से जुड़े 5 प्रश्न स्वयं बनाएं
5. मुख्य पात्र/विषय की पहचान करें

🗓️ दिन 9–16 – लेखन कौशल (Writing Skills)

6. प्रत्येक पाठ पर लघु उत्तरीय प्रश्न लिखें
7. किसी एक पाठ पर अनुच्छेद (150 शब्द)
8. "मेरी प्रिय कहानी" पर लेख लिखें
9. संवाद लेखन (किसी पात्र के आधार पर)
10. पत्र लेखन – मित्र को छुट्टियों का अनुभव

🗓️ दिन 17–24 – रचनात्मक गतिविधियाँ (Creative Work)

11. किसी पाठ का चित्र बनाकर वर्णन करें
12. कविता पाठ (वीडियो या लिखित)
13. कहानी को कॉमिक स्टाइल में बनाएं
14. पोस्टर बनाएं (जैसे – "जल संरक्षण", "पर्यावरण")
15. अपने शब्दों में नई कहानी लिख

🗓️ दिन 25–32 – व्याकरण एवं भाषा (Grammar & Language)

16. संज्ञा, सर्वनाम, विशेषण के उदाहरण लिखें

17. 20 मुहावरे और उनके अर्थ
18. 10 लोकोक्तियाँ और प्रयोग
19. काल (भूत, वर्तमान, भविष्य) पर अभ्यास
20. वाक्य शुद्धि के 20 उदाहरण

📅 दिन 33–40 – परियोजना कार्य (Project Work)

21. "गंगा नदी का महत्व" पर प्रोजेक्ट (चित्र सहित)
22. किसी लेखक का जीवन परिचय (जैसे – पाठ में दिए गए लेखक)
23. "मेरी ग्रीष्मकालीन छुट्टियाँ" पर डायरी (5 दिन)
24. हिंदी भाषा का महत्व (लेख – 200 शब्द)
25. पूरे कार्य का सुंदर फाइल/प्रोजेक्ट तैयार करें

विषयाध्यापक: मनीष शर्मा
प्रशिक्षित स्नातक शिक्षक 'हिन्दी'

PM SHRI KV NO.-1, IIT KHARAGPUR

SUMMER BREAK HOLIDAY HOMEWORK (2026 - 27)

PRACTICE PAPER

CLASS - IX Sub : Mathematics

Instructions:

i) All questions are compulsory.
ii) Show all necessary steps in calculations.
iii) Section A – MCQ type question no. 1 to 10 (1 mark each)
iv) Section B – Very short answer type Q No. 11 to 15 (2 marks each)
v) Section C – Short answer type Q No. 16 to 20 (3 marks each)
vi) Section D – Long answer type Q No. 21 to 23 (5 marks each)
vii) Section E – Case based question Q No. 24 (4 marks)

Section – A

1. The horizontal line in cartesian plane is called

   i) x - axis ii) y - axis iii) z - axis iv) None of these

2. The coordinate of origin is

   i) (1, –1) ii) (2, 1) iii) (3, 4) iv) (0, 0)

3. If x = y, then

   i) (x, y) = (y, x) ii) (x, x) = (y, y) iii) $(x, y) \neq (y, x)$ iv) None of these

4. The distance between two points (x_1, y_1) and (x_2, y_2) is

   i) $\sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$ ii) $\sqrt{(x_1 - y_1)^2 + (x_2 - y_1)^2}$

   iii) $\sqrt{(x_2 - y_1)^2 + (x_1 - y_2)^2}$ iv) $\sqrt{(y_2 - x_1)^2 + (x_2 - y_1)^2}$

5. The nth term of a GP is

   i) $t_n = ar^n$ ii) $t_n = ar^{n+1}$ iii) $t_n = ar^{n+2}$ iv) $t_n = ar^{n-1}$

6. The nth term of a AP is

   i) $t_n = a + (n+1)d$ ii) $t_n = a - (n-1)d$ iii) $t_n = a - (n-2)d$ iv) $t_n = a + (n-1)d$

7. $1 + 2 + 3 + ... + n$

   i) $\frac{n(n-1)}{2}$ ii) $\frac{n(n+1)}{2}$ iii) $\frac{n(n-1)^2}{2}$ iv) $\frac{n(n+1)}{4}$

8. $\sqrt{2}$ is

   i) Rational No. ii) Irrational No. iii) Natural No. iv) None of these

9. $2 + \sqrt{3}$ is

   i) Rational No. ii) Irrational No. iii) Natural No. iv) None of these

10. π is

    i) Rational No. ii) Irrational No. iii) Natural No. iv) None of these

Section – B

11. Find 5 rational numbers between $\frac{2}{5}$ and $\frac{3}{5}$.

12. Which term of the sequence $t_n = 5n - 3$ for $n \geq 1$ is 607?
13. Find the first five terms of the sequence in which the nth term is given by $t_n = 3n - 4$
14. Find the 10th and nth terms of the GP : 5, 25, 125, ...
15. Find the nth term of AP : 11, 8, 5, 2, ...

Section – C

16. Convert the following decimal numbers in the term of $\frac{p}{q}$

    i) $1.2\overline{35}$ ii) $3.12\overline{5}$

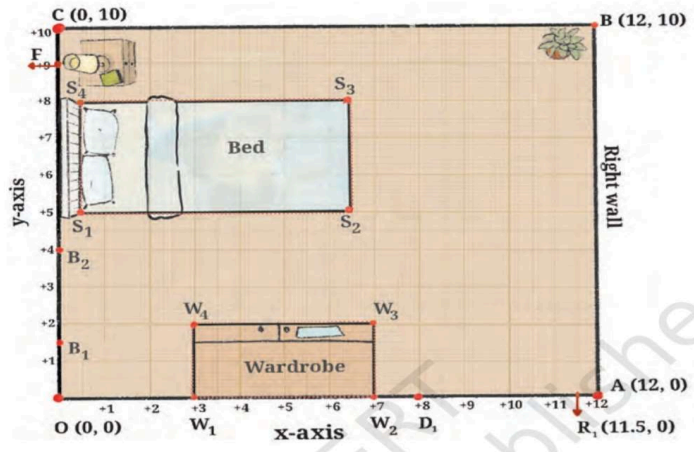
17. A tailor has $15\frac{3}{4}$ metres of fine silk. If making one kurta requires $2\frac{1}{4}$ metres of silk, excatly how many kurtas can be make?
18. Point W has x - coordinate equal to –5. Can you predict the coordinates of point H which is on the line through W parallel to the y - axis?
19. Which term of the AP : 3, 8, 13, 18, ... is 128? Also, is 48 a term of this AP?
20. Plot the points A (2, 1), B (–1, 2), C (–2, –1) and D (1, –2) in the coordinate plane. Is ABCD a square? Can you explain why? What is the area of this square?

Section – D

21. Prove that $\sqrt{5}$ is an irrational number.
22. Let $T_1 = 1$, $T_2 = 2$, $T_3 = 4$ and $T_n = T_{n-1} + T_{n-2} + T_{n-3}$ for $n \geq 4$. Find T_4, T_5, T_6, T_7 and T_8.
23. An AP consists of 50 terms in which the 3rd term is 12 and the last term is 106. Find the 29th term.

Section – E

24. Fig. 1 shows Rian's room with points OABC marking its coners the x and y axes are marked in the figure. Point O is the origin.



(Fig. 1)

Referring to fig. 1, answer the following questions:

i) If D_1R_1 represents the door to Rian's room, how far is the door from the left wall (the y - axis) of the room? How far is the door from the x-axis?

ii) What are the coordinates of D_1?

iii) If R_1 is the point (11.5, 0), how wide is the door?

iv) If B_1 (0, 1.5) and B_2 (0, 4) represent the ends of the bathroom door, is the bathroom door narrower or wider than the room door?

पी एम श्री केन्द्रीय विद्यालय क्रमाङ्क- **1,**भा. प्रौ. सं., खडगपुर

ग्रीष्मावकाशगृहकार्यम् **– 2026**

कक्षा – नवमी विषयः – संस्कृतम्

(Make **separate FILE** for Holiday homework .)

1. स्वरसन्धि की परिभाषा और प्रकार लिख कर प्रत्येक भेद के पाँच पाँच उदाहरण लिखो।

2. कोई भी दश श्लोक अर्थ के साथ लिखो ।

3. शब्दरूप लिखो-

क) कोई भी तीन अकारान्त पुंल्लिङ्ग शब्दरूप – छात्र, देव, गज, अश्व, वृक्ष

ख) कोई भी तीन आकारान्त स्त्रीलिङ्ग शब्दरूप – सभा, शाखा, शोभा, कक्षा, कला

ग) कोई भी तीन ईकारान्त स्त्रीलिङ्ग शब्दरूप – नदी, देवी, नारी, भारती, पार्वती

4. संस्कृत में छात्र प्रतिज्ञा

5. धातुरूप (पाँच लकारों में)- अस्, कृ, पा, भू , गम्, नी, पा, नम्

6. 1 से 100 तक संस्कृत में संख्यावाचक शब्द लिखो।

7. किसी एक विषय पर संस्कृत में एक अनुच्छेद लिखो।

अस्माकं देशः , अनुशासनस्य महत्त्वम्, जलसुरक्षा- अभियानम्

—----------

PM SHRI KENDRIYA VIDYALAYA NO.1 IIT KHARAGPUR (2026-27)

CLASS- IX-A, B, C & D

SUBJECT- SCIENCE

SUMMER VACATION HOLIDAY HOMEWORK

ANSWER THE FOLLOWING QUESTIONS (TO BE DONE IN SCIENCE NOTEBOOK)

1. Farmer Deepa uses salt and sugar to preserve perishable produce like amla and lemon.
   a. Which scientific concept (related to water movement) is applied here?
   b. How does this high-concentration environment prevent the growth of spoilage-causing bacteria and fungi?
   c. What are the scientific values demonstrated by shifting from raw farming to sustainable agro-processing?
2. Mitochondria are often described as the "powerhouse of the cell".
   a. Instead of many small ones, why does a cell not have a single giant mitochondrion? Explain this using the concept of surface area.
   b. What outcome would you predict if all mitochondria were removed from a eukaryotic cell?
3. Why is a cell wall necessary for plants, which are typically fixed in one place, while animal cells, which often move, rely on flexibility?
4. Cancer cells lose the ability of contact inhibition and divide uncontrollably. What does this suggest about the role of normal cell-to-cell communication in maintaining body health?
5. Practice scientific estimation by calculating how many litres of air you breathe in a single day, and how much rice would feed a family of four for a month, using reasonable assumptions and simple math.
6. Predict the consequences for tissue repair if skin cells were to divide by meiosis instead of mitosis.
7. If a researcher places two carrots of similar size in plain water and concentrated salt solution, what hypothesis are they testing, and why does the one in salt solution become limp?
8. A cell is placed in a solution that is hypertonic to its interior.
   a. Using the definition of osmosis, predict the direction of net water movement.
   b. Explain why the cell might experience "plasmolysis" if it is a plant cell, but simply shrink if it is an animal cell.
9. How do prokaryotic cells, which lack mitochondria, manage to generate ATP (energy) for their life processes?
10. If the cell is a "tiny living factory," match the following organelles to their industrial equivalent and explain your reasoning:
    a. Golgi apparatus: (e.g., shipping/packaging department)
    b. Lysosomes: (e.g., waste disposal/recycling unit)

c. **Endoplasmic Reticulum:** (e.g., assembly line/transport highway)

11. Small cells are generally more efficient at exchanging materials with their environment than very large cells. How does the plasma membrane's structure facilitate this, and why would an extremely large, single-celled organism struggle to survive?
12. The text mentions thermophilic bacteria in the Puga Valley. Investigate how these organisms maintain the integrity of their cell membranes at near-boiling temperatures compared to the cells found in your body.
13. Create a Venn diagram comparing a plant cell and an animal cell.
    In the overlapping section, list structures present in both (e.g., nucleus, cell membrane, cytoplasm).
    In the distinct sections, identify structures unique to plants (e.g., cell wall, large central vacuole, chloroplast) and those unique or more common in animals (e.g., centrioles).
14. Sketch a mitochondrion and label the inner and outer membranes. Briefly explain how its folded inner structure (cristae) relates to its role in energy production (ATP).
15. Draw a comprehensive, large-scale diagram of both plant and animal cells.
    Clearly label the **Nucleus, Mitochondria, Golgi Apparatus, Rough ER, Cell Wall, Chloroplasts, and Lysosomes**.
16. For each question, choose from the following options:
    (a) If both Assertion and Reason are true and Reason is the correct explanation of Assertion.
    (b) If both Assertion and Reason are true but Reason is not the correct explanation of Assertion.
    (c) If Assertion is true but Reason is false.
    (d) If both Assertion and Reason are false.

Assertion (A): Eukaryotic cells contain membrane-bound cell organelles and linear chromosomes present in the nucleus.
Reason (R): Prokaryotic cells lack a well-defined nucleus and membrane-bound organelles.

Assertion (A): Lysosomes are known as the "suicide bags" of the cell.
Reason (R): They contain digestive enzymes that can break down cellular components or foreign material when the cell is damaged.

Assertion (A): The nucleus acts as the "control center" of the cell.
Reason (R): It contains the genetic material (DNA) that directs all metabolic activities and coordinates cellular reproduction.

17. Why is the organization of cells into tissues more efficient for a human body than having all cells perform identical functions?
18. Create a table contrasting meristematic and permanent tissues based on cell wall thickness, vacuole size, and capacity for division.
19. <u>SUBJECT ENRICHMENT ACTIVITY (TO BE DONE IN FILE)</u>

a. Turn a nature walk into a research project. (i) Observe different leaves and study their adaptations for various environments, such as desert, very moist or aquatic habitats. (ii) Consult an elder community resource persons about their knowledge on different plant leaves, such as leaves that remain fresh for a long time, repel water or deter insects. Find out their traditional uses, such as making plates, preparing cooling wraps or functioning as insect repellents.
b. Visit a doctor and find out what happens in ligament rupture, cartilage rupture and fracture of bones. How can we reduce the risk by changing our lifestyle and nutritional balance?
c. Create a model of any type of a 'synthetic cell' using low-cost eco-friendly material.

20. Write an experiment to- (To be done in practical notebook)
    a. To prepare a stained, temporary mount of onion peel and to study its cells.
    b. To prepare a temporary mount of human cheek epithelial cells, and to study its characteristics.

21. <u>Art-integrated Project on</u>

A Comparative Study of the Flora and Fauna of Darjeeling and Sundarbans

Or

Karma Dance: A Link Between Culture and Human Anatomy

Art Integrated Project should be prepared in the given order –

I. Cover page showing project title, schools name, students name, class and section and academic session (year).

II. List of contents with page number and Index. Acknowledgements: Acknowledging institution, offices and libraries visited and people who have helped.

a. Project Overview: Purpose, aim, methodology and experience while doing the project.

b. Contents with relevant headings.

c. Diagrams, charts and graphs.

d. Summary and conclusions based on the study and findings.

e. References - It should have the title, pages referred, author, publisher, year of publication and if a website, the name of the website/link.

f. Teachers evaluation sheet to be attached at the end of the project file.

PROJECT EVALUATION PROFORMA

The Proforma should be attached on the last page of the project and must include the following - ● Student's Name ● Roll. No ● Class and Section ● School name and address ● Teacher Assessment – 1. Content accuracy and originality 2. Presentation and creativity 3. Process of project competition 4. Overall remarks 5. Teacher signature 6. Students signature 7. Date of submission

SUMMER HOLIDAY HOMEWORK: ART INTEGRATED PROJECT

Academic Session: 2026-27 | Classes: IX & X

Theme: Dharohar – Exploring India's Visual Heritage

In accordance with the Art Education Split-up Syllabus and NCERT Art Integrated Learning (AIL) guidelines, students are to complete a multidisciplinary project that bridges the gap between scholastic subjects and traditional Indian art forms.

Project Options (Choose ONE)

Option A: Narrative History through Scroll Art (Patachitra/Phad)

Identify a major historical event (e.g., The Indian Freedom Struggle or French Revolution). Depict this narrative in the form of a 'Pata' (Scroll) using Bengal Patachitra or Phad style. Divide the sheet into panels to show the chronological sequence of events.

Option B: Physical Landscapes through Warli/Mandala

Represent the physical features of India (Mountains, Coastal regions, or Plateaus) using the geometric precision of Mandala art or the tribal storytelling style of Warli art. Focus on the harmony between nature and human settlements.

Technical Specifications

Medium: Handmade paper, A3 Ivory sheet, or a Cardboard base.

Materials: Acrylic colors, poster colors, or natural pigments. Fine-liner pens for detailing.

Layout: Border designs must be inspired by the chosen traditional art form.

Essential Notes for Students

Neutrality & Ethics: As this is a school project, ensure your content is educational and respectful. Avoid any political propaganda, controversial caricatures, or sensitive political commentary.

Originality: The work must be hand-painted. Avoid using digital prints or stickers.

Documentation: Maintain a brief report (150 words) explaining the origin of the art form and why it was chosen to represent the specific subject topic.

Signature: Digitally or manually sign your work in the bottom right corner with your name and date.

Evaluation Criteria

Creativity and Originality (5 Marks)

Integration with Subject (5 Marks)

Technique and Detailing (5 Marks)

Timely Submission (5 Marks)

PM SHRI KV NO 1 IIT KHARAGPUR
SUMMER VACATION HOLIDAY HOMEWORK
Session -2026-27
Class IX – English

Section A: Short & Long Answer Questions (Textual)

1.Unit 1: *How I Taught My Grandmother to Read & Bharat Our Land*

Short Answer Questions (40–50 words):

a) Why was the grandmother in Sudha Murty's story so determined to learn the Kannada alphabet at the age of sixty-two?
b) How does the grandmother express her gratitude to her granddaughter for teaching her?
c) In the poem *Bharat Our Land*, how does Subramania Bharati describe the physical and spiritual greatness of India?

Long Answer Questions (100–120 words):

a) "Education is not bound by age, but by the will to learn." Justify this statement using the grandmother's journey from dependence to literacy.
b) Compare how the prose piece and the poem in Unit 1 reflect deep-rooted Indian values and a sense of national pride.
c) Analyze the relationship between the narrator and her grandmother. How does their role-reversal as teacher and student enhance their mutual respect?

Unit 2: *The Pot Maker* & *Gifts of Grace*

Short Answer Questions (40–50 words):

a) What does the term "vocational pride" mean in the context of the story *The Pot Maker*?
b) How does the poem *Gifts of Grace* emphasize the dignity of manual labor?
c) Describe the protagonist's attitude toward their craft as explored in this unit.

Long Answer Questions (100–120 words):

a) Discuss how Unit 2 explores the theme of "Honouring Our Vocations." Why is finding grace in one's work essential for personal fulfillment?
b) Contrast the way the story and the poem depict the relationship between a creator and their creation.
c) Imagine you are the "Pot Maker." Write about the spiritual satisfaction you feel when a piece of work is completed with perfection.

Section B: Creative Writing Skills

1. **Descriptive Paragraph:** Write a descriptive paragraph (100-120 words) about a person in your life who, like the grandmother in Unit 1, showed **great determination** to learn something new. Use verbal cues to describe their traits and the situation effectively.
2. **Diary Entry:** Imagine you are the narrator from *"How I Taught My Grandmother to Read"*. Write a **diary entry** (100-120 words) expressing your feelings of pride and joy after your grandmother touched your feet as a mark of respect for being her teacher

Section C: Integrated Grammar Practice

1. **Editing Task:** Locate a short news article (approximately 100 words). Identify and correct at least five errors related to **Determiners or Subject-Verb Concord**.
2. **Reported Speech:** Based on a conversation you had with a family member during the holidays, convert five of their statements into **Indirect Speech**. Ensure you correctly shift the **tenses, pronouns, and time/place adverbs**.

Section D: Art-Integrated & Competency-Based Project

- **Comic Strip Creation:** Create a 6-8 panel **pictorial representation** (comic strip) of the story *"The Pot Maker"* (Unit 2). Focus on depicting the **emotions and vocational pride** of the characters.
- **Role Play Script:** Write a short **skit script** based on a scene from the play *"Twin Melodies"* (Unit 6). Focus on creating natural dialogue that demonstrates **effective oral communication.**

Guidelines for Preparation and Study Tips: -

- Read each chapter at least three times—first for the plot, second to meet the characters, and third to uncover hidden meanings in stanzas and speeches.
- Jot down notes in your own everyday language instead of copying the book; this helps your brain grasp and retain concepts much faster.
- Use the "Reflect and Respond" and "Critical Reflection" sections at the end of each unit as a self-assessment tool to ensure you've mastered the lesson.
- Stick to 30–45-minute study sessions to build your communication confidence and avoid feeling mentally overloaded.

Success is the result of consistent preparation and hard work, so use this break to build the habits that will help you communicate with confidence and clarity throughout the year……..