



DELHI PUBLIC SCHOOL GAYA

(Under the aegis of the Delhi Public School Society, New Delhi)
Affiliated to C.B.S.E, New Delhi Affiliation No.330530, School Code - 65572

SUMMER VACATION ASSIGNMENT CLASS-IX (SESSION: 2025-26)

Your Summer Vacation assignment has some very interesting tasks that will make your learning session fun and engaging. So, let's start!

ENGLISH LANGUAGE AND LITERATURE (184)

Creative Writing [2x10=20 Marks]

Important Note: The creative writing pieces from this section will be considered for the Inter-House Creative Writing Event scheduled for June. Your best work may represent your house in the competition!

General Instructions:

- **Originality is key.**
All submissions must be entirely your own work. Plagiarism—copying from books, websites, or any other sources—will lead to disqualification and zero marks. We value your individual creativity and voice.
- **Presentation format:**
 - * Use A4 sheets only.
 - * Write neatly in clear, legible handwriting.
 - * Each page must include your name, class, and section.
 - * Mention the word count at the end of every piece.
- **Creative Portfolio:**
 - * Design a hardcover folder titled "PORTFOLIO."
 - * Begin with a self-introduction page (brief write-up about yourself).
 - * File all your best language-based work from the holiday assignment inside this portfolio.
 - * Arrange your A4 sheets neatly and creatively within it.
- **Evaluation Criteria: Originality, imagination, clarity of expression, language use, and overall presentation will be key to your assessment.**

Let your words reflect your thoughts. Let your presentation reflect your passion. Your portfolio is your creative fingerprint – make it count!

1. **Poetry Writing:** Choose one of the following contemporary themes and craft a poem of approximately 84 words. You are welcome to explore any poetic form that inspires you, such as haiku, sonnet, free verse, or any other structure you prefer. Feel free to enrich your poem with literary devices such as metaphor, simile, imagery, personification, and alliteration to enhance its impact and beauty.

Themes:

- Digital Footprints: Our Lives Online
- Climate Warriors: Youth Leading Change
- Solitude in a Connected World

2. Prose Writing: Select one of the following contemporary themes and write a piece of prose of approximately 124 words (again, a little flexibility is allowed). Focus on developing a clear idea, engaging the reader, and using descriptive language.

Themes:

- The Last Letter: In an Age of Instant Messages
- Artificial Intelligence: Friend or Frenemy?
- "Voices Unheard: Stories from the Margins"

हिन्दी (085)

1. भक्ति काल के किन्हीं पाँच रचनाकारों का संक्षिप्त सचित्र परिचय लिखिए तथा उनकी किसी एक प्रचलित रचना की पंक्तियों का उल्लेख भी कीजिए।
2. भगवाना की माँ जैसी समाज की किसी अन्य गरीब महिला के जीवन में आने वाली समस्याओं के बारे में पता करके लगभग 100 शब्दों में लिखिए।
3. आप अपने घर में माता-पिता का सहयोग किन-किन कार्यों में करते हैं? लगभग 100 शब्दों में लिखिए।
4. महादेवी वर्मा द्वारा रचित 'मेरा परिवार' पुस्तक से गिल्लू के अतिरिक्त किसी अन्य कहानी को पढ़कर उसका सारांश अपने शब्दों में लिखिए।
5. स्रोत एवं रचना के आधार पर शब्द के भेदों को सोदाहरण दर्शाते हुए एक वृत्त-चित्र बनाइए।

SANSKRIT (122)

१. संख्याशब्दाः (एकतः पञ्चाशत् पर्यन्तम्)
 २. उपसर्गाः (द्वाविंशतिः उदाहरणैः सह लिखत।)
- एतत् गृहकार्यं स्वस्य परियोजनापुस्तिकायाम् (Assignment Copy) लिखत।

MATHEMATICS (041)

1. If $a + b + c = 5$ and $ab + bc + ca = 10$, then prove that $a^3 + b^3 + c^3 - 3abc = -25$.
2. Prove that $(a+b+c)^3 - a^3 - b^3 - c^3 = 3(a+b)(b+c)(c+a)$.
3. Factorise:
(a) $x^{12} - y^{12}$ (b) $(a + 2b)^2 + 101(a + 2b) + 100$
4. What must be subtracted from $(x^4 + 2x^3 - 2x^2 + 4x + 6)$ so that the result is exactly divisible by $x^2 + 2x - 3$?
5. Find the values of a and b so that the polynomial $x^4 + ax^3 - 7x^2 - 8x + b$ is exactly divisible by $(x + 2)$ and $(x + 3)$.

6. Write the following in descending order of magnitude: $\sqrt[3]{2}$, $\sqrt{3}$, $\sqrt[6]{5}$.
7. Find the value of $(256)^{0.16} \times (256)^{0.09}$
8. Find out five different irrational numbers between the rational numbers $5/7$ and $9/11$.
9. Find out which of the variables x , y , z and u represent rational numbers and which irrational numbers:

(i) $x^2 = 5$

(ii) $y^2 = 9$

(iii) $z^2 = 0.04$

(iv) $u^2 = 17/4$

10. If $a = \frac{\sqrt{3}-\sqrt{2}}{\sqrt{3}+\sqrt{2}}$ and $b = \frac{\sqrt{3}+\sqrt{2}}{\sqrt{3}-\sqrt{2}}$ Then find the value of $a^2 + b^2 - 7ab$.
11. Evaluate: $\frac{15}{\sqrt{10}+\sqrt{20}+\sqrt{40}-\sqrt{5}-\sqrt{80}}$, Use $\sqrt{5} = 2.236$ and $\sqrt{10} = 3.162$.
12. If $x = 3+2\sqrt{2}$, Then find the value of:
 - (a) $\frac{1}{x}$
 - (b) $x + \frac{1}{x}$
 - (c) $x^2 + \frac{1}{x^2}$
 - (b) $x^2 - \frac{1}{x^2}$
 - (e) $x^3 - \frac{1}{x^3}$
13. Prove that: $\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \frac{1}{\sqrt{3}+\sqrt{4}} + \frac{1}{\sqrt{4}+\sqrt{5}} + \frac{1}{\sqrt{5}+\sqrt{6}} + \frac{1}{\sqrt{6}+\sqrt{7}} + \frac{1}{\sqrt{7}+\sqrt{8}} + \frac{1}{\sqrt{8}+\sqrt{9}} = 2$
14. If $\frac{9^n \times 3^2 \times \left(\frac{-n}{3^2}\right)^{-2} - 27^n}{3^{3m} \times 2^3} = \frac{1}{27}$, Then prove that: $m-n = 1$
15. Factorise: $x^3 - 23x^2 + 142x - 120$.
16. If both $(x-2)$ and $\left(x - \frac{1}{2}\right)$ are the factors are $px^2 + 5x + r$, then prove that $p=r$.
17. Factorise : $(a-3b)^3 + (3b-4c)^3 + (4c-a)^3$
18. Verify that: $8x^3 + 27y^3 = (2x+3y)(4x^2+9y^2-6xy)$
19. Express the value in $\frac{p}{q}$: $0.5\overline{27} + 5.3\overline{17} - 2.1\overline{37}$.
20. **Activity:**

Make an Art integrated activity on Factorization of Quadratic Polynomial for help (Visit the give URL <https://youtu.be/0A14cAdVTT8?si=tCmPMgqrIYIK-Wk3>)

SCIENCE (086)

PHYSICS

1. A racing car has a uniform acceleration of 4m/s^2 . What distance will it cover in 10 s after start?
2. A motorcyclist drives from A to B with a uniform speed of 30 kmh^{-1} and returns back with a speed of 20 kmh^{-1} . Find its average speed.

3. On a 120km track, a train travels the first 30km at a uniform speed of 30km/h. how fast must the train travel the next 90km so as to average 60km/h for the entire trip?
4. A body is moving with a velocity of 10m/s. If the motion is uniform, what will be the velocity after 10 s?
5. A car starts from rest and moves along the x-axis with constant acceleration 5ms^{-2} for 8 seconds. If it then continues with constant velocity, what distance will the car cover in 12 seconds since it started from rest?
6. An object starting from rest travels 20 m in first 2s and 160 m in next 4 s. What will be the velocity after 7s from start?
7. A body is moving in a circular path of radius 100m. Find the distance and displacement of the body
 - (a) when the body moves 90 degree along the circumference
 - (b) when the body moves 120 degree along the circumference
 - (c) when moves 2.5 revolution along the circumference
8. A body covered a distance of 4 metre along a semicircular path. Calculate the magnitude of displacement of the body, and the ratio of distance to displacement?
9. A particle was at rest from 1 a.m. It moved at a uniform speed 40km/hr from 1.30 a.m. to 2:00 a.m. Find the average speed between
 - (a) 1.00 a.m. and 2.00 a.m.
 - (b) 1.15 a.m. and 2.00 a.m.
 - (c) 1.30 a.m. and 2.00 a.m.
10. An object moves along a circular path of diameter 16 cm with constant speed. If it takes 4 min. to move from a point on the path to the diametrically opposite point. Find
 - (a) The distance covered by the object
 - (b) The speed
 - (c) The displacement
 - (d) Average velocity

CHEMISTRY

1. You want to wear your favourite shirt to a party, but the problem is that it is still wet after a wash. What steps would you take to dry it faster?
2. Water as ice has a cooling effect, whereas water as steam may cause severe burns. Explain these observations.
3. Fill in the blanks:
 - (a) Evaporation of a liquid at room temperature leads to a _____ effect.
 - (b) At room temperature the forces of attraction between the particles of solid substances are _____ than those which exist in the gaseous state.
 - (c) The arrangement of particles is less ordered in the _____ state. However, there is no order in the state.
 - (d) _____ is the change of gaseous state directly to solid state without going through the _____ state.

- (e) The phenomenon of change of a liquid into the gaseous state at any temperature below its boiling point is called _____.
4. Osmosis is a special kind of diffusion'. Comment.
5. Alka was making tea in a kettle. Suddenly she felt intense heat from the puff of steam gushing out of the spout of the kettle. She wondered whether the temperature of the steam was higher than that of the water boiling in the kettle. Comment.

BIOLOGY

Choose the correct options:

1. The word 'cell' is derived from
- (a) Greek word that means 'small box-like structure'
 - (b) Latin word that means 'a little room'
 - (c) Greek word that means 'a little room'
 - (d) Latin word that means 'small box-like'
2. Living cells were discovered by
- (a) Robert Hooke
 - (b) Purkinje
 - (c) Leeuwenhoek
 - (d) Robert Brown
3. The term 'protoplasm' was coined by
- (a) Purkinje
 - (b) Robert Hooke
 - (c) Virchow
 - (d) Robert Brown
4. Cell theory states that cells are structural and functional unit of
- (a) plants
 - (b) animals
 - (c) Both [a] and [b]
 - (d) microbes
5. The cell theory was further explained by Virchow.
- (a) True
 - (b) False
 - (c) Can't say
 - (d) Partially true/false
6. Choose the incorrect statement from the following options.
- (a) All cells arise from pre-existing cells only
 - (b) Rudolf Virchow proposed the cell theory
 - (c) Nucleus was discovered by Robert Brown in 1831
 - (d) The nucleus and cytoplasm of a living cell
7. Diffusion is the process in which substance move from region of(A) concentration to a region of ...(B)...concentration.
- (a) (A)-low,(B)-high
 - (b) (A)-high,(B)-low
 - (c) (A)-low,(B)-low
 - (d) (A)-high,(B)-high
8. A cell will swell up if
- (a) the concentration of water molecules in the cell is higher than the concentration of water molecules in surrounding medium
 - (b) the concentration of water molecules in surrounding medium is higher than water molecules concentration in the cell

- (c) the concentration of water molecules is same in the cell and in the surrounding medium
- (d) concentration of water molecules does not matter
- 9. Osmosis is the special case of diffusion through a selectively permeable membrane.
 - (a) True
 - (b) False
 - (c) Can't say
 - (d) Partially true or false
- 10. Amoeba acquires its solid food through a process, termed
 - (a) phagocytosis
 - (b) endocytosis
 - (c) plasmolysis
 - (d) pinocytosis

Answer the following questions:

1. Name the smallest cell in human body?
2. Why Plant cells are more rigid than animal cells?
3. Explain the process of osmosis and give an example.
4. What happen when a plant cell and an animal cell are separately kept in (i) Hypertonic (ii) Hypotonic (iii) Isotonic solution? Write the reason for your observation.
5. Write 2 structural and 1 functional differences of cell membrane.

SOCIAL SCIENCE (087)

Answer the following questions:

1. Infer how the French Revolution had an impact on the European countries in the making of nation states in Europe and elsewhere.
2. "The quest for imperialism triggered the First World War". Illustrate the statement.
3. By referring to the Preamble to the Indian Constitution, explain how Indian Constitution helps in strengthening Indian democracy.
4. Use Google earth to represent and justify the reasons for the differences in climatic conditions, local and standard time. Show the same in your notebook.
5. Enlist the requirements of production and also explain the interdependence of these requirements. For completing the production process.

Map Work:

6. Locate physiographic regions of India and the climatic zones of the world on a globe/map.
7. Outline political map of France. - Bordeaux, Nantes, Paris and Marseille.
8. Outline political map of the World. Major countries of First World War: Central Powers: Germany, Austria-Hungary, Turkey (Ottoman Empire). Allied Powers -France, England, Russia and USA.

Learning journey:

9. Visit to a nearby village or local markets and interview different classes of farmers to know about their lifestyles and thereafter present in the class.

Note: Complete your summer vacation assignment using only standard A4 size WHITE paper. Staple the completed pages together to form a booklet.

Part A: Employability Skills

Chapter: Communication Skills

Task:

Prepare a poster or digital presentation (5–6 slides) on the topic:

“Barriers to Effective Communication and How to Overcome Them”

Include:

- Definition of communication
- Types of communication (Verbal, Non-verbal, Written, Visual)
- At least 4 barriers with real-life examples
- Tips to overcome each barrier

Bonus (Optional): Record a 1-minute video explaining how you use effective communication in daily life.

Chapter: Self-Management Skills

Task:

- (a) Maintain a Daily Habit Tracker for 15 days (any format: digital or handmade)

Track at least 5 self-management areas like:

- Waking up on time
- Completing homework
- Limiting screen time
- Exercising or walking
- Helping at home

- (b) Write a short self-reflection (100-150 words) on:

“How self-discipline helps me grow personally and academically.”

Part B: Artificial Intelligence

Chapter: AI Reflection, Project Cycle, and Ethics

Task:

- (a) AI Reflection Journal

Write 2 short paragraphs on the following:

“Where do I see AI in my surroundings?”

“One problem I can solve using AI in the future is...”

- (b) Project Cycle Mapping

Create a diagram/poster showing the 5 stages of the AI Project Cycle.

Mention:

- Define the problem
- Data collection
- Data exploration
- Modelling

- Evaluation

Add one simple example (e.g., AI-based weather prediction or chatbot).

(c) Ethics in AI

Prepare a mind map or infographic on the topic:

“Do’s and Don’ts of Ethical AI Use”

Include:

- Bias in AI
- Privacy concerns
- Real-world cases of unethical AI use
- How we can use AI responsibly

INFORMATION TECHNOLOGY (902)

Instructions:

- **Submit the assignment (Hard copy) in a file.**

1. Project Title: Create a Personal Resume

Tasks:

- Open LibreOffice Writer.
- Create a resume with sections like Objective, Skills, Education, Hobbies, etc.
- Apply formatting: headings, bullet points, and tables.
- Insert a photo and use page borders.

Learning Outcome: Practice word processing and formatting skills.

2. Project Title: My Monthly Budget Planner

Tasks:

- Open LibreOffice Calc.
- Create a table showing expected vs actual expenses (categories like food, transport, etc.).
- Use formulas to calculate total, difference, and savings.
- Insert a pie chart to visualize the expenses.

Learning Outcome: Gain practical spreadsheet and data analysis skills.

3. Project Title: My Business Idea

Tasks:

- Think of a simple product/service idea (e.g., eco-friendly bags, mobile repair, and homemade snacks).
- Write a one-page business plan: Product name, Target audience, Marketing method, Profit estimation.
- Include a hand-drawn or digital logo.
- Use LibreOffice Writer.

Learning Outcome: Develop entrepreneurial thinking and creativity.

4. Project Title: Green Living: My Contribution

Tasks:

- Write a short essay (200–300 words) on how you contribute to sustainability at home or school.
- Include photos or drawings (e.g., waste segregation, planting trees, saving electricity).
- Suggest three new green initiatives you would like to implement.
- Use LibreOffice Writer.

Learning Outcome: Build awareness of environmental responsibility.

GERMAN

Task1: Aktivität: Rollenspiel – Im Restaurant

Übung von W-Fragen und Modalverben (möchten, dürfen)

Wortschatz zum Thema „Essen und Trinken“

Task 2: My Daily Routine – Write a Short Paragraph

ART & CRAFT

As part of the Summer Vacation Homework, each student is required to prepare:

- 2 Paintings
- 1 Craft Item

These items will be showcased during the Art Exhibition 2025.

Guidelines:

Paintings:

- Must be done on A3 or A4 size sheets only.
- Medium: Any colour medium is allowed (e.g., watercolours, poster colours, oil pastels, pencil shading, etc.).

Craft Item:

- Can be of any size.
- Must be strictly art-related (e.g., Paper Mache, Clay Modelling, Best out of Waste, etc.).

Note: Models or projects prepared for other academic subjects will not be accepted.

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