



GD DAV PUBLIC SCHOOL

BHANDARKOLA, SATAR ROAD, DEOGHAR

SUMMER VACATION ASSIGNMENT AND PROJECT: 2026-27

CLASS - IX

NAME: _____ ROLL No. _____

SUBJECT: ENGLISH

ASSIGNMENT

1. Write any eight literary devices along with their definitions and suitable examples. The work should be written neatly and presented in a well-organised manner in the assignment note book.
2. Write the questions and answers from the first lesson 'How I Taught My Grandmother to Read'. Answers should be written in the assignment note book in complete sentences with neat handwriting and proper presentation.

PROJECT

Prepare the different types of Tenses on chart paper along with their structures and suitable examples. The work should be neat, well-labeled, colorful and properly organized for clear understanding.

SUBJECT: HINDI

हिन्दी परियोजना कार्य

- 1 उपसर्ग एवं प्रत्यय के दस-दस उदाहरण कॉफी में लिखें
- 2 अलंकार और शब्दालंकार के भेदों को 10-10 उदाहरण के साथ चार्ट पेपर में लिखें
- 3 आपने गर्मी की छुट्टियाँ किस प्रकार बिताई यह बताते हुए अपने मित्र को एक पत्र लिखें ।
- 4 हिन्दी के किसी साहित्यकार के जीवन परिचय को उनकी रचनाओं के साथ चार्ट पेपर पर दर्शाते हुए लिखें ।

SUBJECT: SANSKRIT

ग्रीष्मावकाशस्य गृहकार्य परियोजनाकार्यं च

- 1) "बालक-कवि- साधु- मति-नदी-भवत्-वारि" शब्दरूपाणि उत्तरपुस्तिकायाम् लिखित्वा स्मरत।
- 2) "पठ्, गम्, वद्, भू, क्रीड्, नी" धातुरूपाणि उत्तरपुस्तिकायाम् लिखित्वा स्मरत।(पञ्चलकारेषु)
- 3) परियोजना कार्यम्- चित्रमाध्यमेन उच्चारणस्थानानि प्रदर्शयतु।

SUBJECT: MATHEMATICS

Section A: Activity Work

Draw a Square Root Spiral (Theodorus Spiral) representing $\sqrt{2}$, $\sqrt{3}$, $\sqrt{4}$, $\sqrt{5}$, $\sqrt{6}$, $\sqrt{7}$... in a creative and colorful way.

Section B: Coordinate Geometry

1. A point lies on y-axis at a distance of 2 units from x-axis. Find coordinates.
2. Which points lie on x-axis: A(3,-1), B(4,0), C(-2,0), D(0,3), E(-2,-1), F(-4,0), G(1,0)
3. Plot A(8,3), B(0,-1), C(-2,3), D(6,7). Identify shape.
4. Find mirror image of (3,9) in x-axis.
5. Plot A(3,0), B(3,3), C(0,3), O(0,0). Name figure.
6. Find coordinates of point on x-axis 9 units from y-axis and on y-axis 9 units from x-axis.
7. From point P, perpendiculars PM=3 units to x-axis and PN=2 units to y-axis. Find coordinates of P, M, N.

Section C: Number System

1. Write two rational numbers between $\sqrt{2}$ & $\sqrt{3}$
2. Write two irrational numbers between 2.2 & 2.3
3. Represent $\sqrt{10}$, $\sqrt{17}$, $\sqrt{9.5}$ on number line.
4. Rationalize the denominators : $\frac{(\sqrt{3}+\sqrt{2})}{(\sqrt{3}+\sqrt{2}-\sqrt{5})}$
5. Convert recurring decimals into rational numbers.
(A) $2.\overline{34}$ (B) $5.\overline{45}$
6. Evaluate $x^2 + y^2 + xy$, if $x = \frac{(\sqrt{5}-\sqrt{2})}{(\sqrt{5}+\sqrt{2})}$ and $y = \frac{(\sqrt{5}+\sqrt{2})}{(\sqrt{5}-\sqrt{2})}$
7. Simplify the expression: $\frac{1}{\sqrt{2}+1} + \frac{1}{\sqrt{3}+\sqrt{2}} + \frac{1}{\sqrt{4}+\sqrt{3}} + \frac{1}{\sqrt{5}+\sqrt{4}}$
8. Find a and b, if : $\frac{7+3\sqrt{5}}{7-3\sqrt{5}} = a + \sqrt{5}b$

SUBJECT: SCIENCE

(PHYSICS)

ASSIGNMENT

Solve the numerical problems based on the chapter 'Motion.'

Project Work

Prepare the Graphical Representation of the Equations of Motion with proper labeling.

CHEMISTRY

Heating Ice Activity

A student heats ice and records the temperature at regular intervals.

- What happens to temperature during melting of ice?
- Why does the temperature remain constant during melting?
- What is the process called when liquid changes to gas?
- Name the temperature at which water boils.

Tyndall Effect (Light Scattering) Task

Build a setup to show light scattering in different mixtures.

- Which mixture shows the visible light path?
- Why does salt solution not show this effect?
- What does this tell you about particle size?

Solutions

- What is a solution? Name its components.
- Define solute and solvent with examples.
- What is concentration of a solution?
- Write the formula for concentration in terms of mass by mass percentage.
- Differentiate between dilute and concentrated solutions.

BIOLOGY

- The most abundant material in plant cell wall is
(a) cellulose (b) lipids (c) proteins (d) wax
- Most of the substances in the living world are transported across the cell membrane by the process of
(a) osmosis (b) endocytosis (c) diffusion (d) plasmolysis
- Cell wall is absent in
(a) Plants (b) Bacteria (c) Fungi (d) Mycoplasma
- In a cell DNA is found in:
(a) Nucleus, mitochondria and plastid (b) Nucleus, mitochondria and Golgi body
(c) Mitochondria, Golgi body and plastid (d) Nucleus, Golgi body and plastid
- Engulfing of food materials or foreign bodies by cells like Amoeba is called
(a) diffusion (b) endocytosis (c) osmosis (d) plasmolysis

#Assertion and Reason

- Both assertion and reason are true and reason is the correct explanation of assertion

2. Both assertion and reason are true but reason is not the correct explanation of assertion
3. Assertion is true but reason is false
4. Assertion is false but reason is true

Solve the following questions

1. Assertion (A): The cell membrane is selectively permeable.
Reason (R): The cell membrane allows only certain substances to pass through it while restricting others.
 2. Assertion (A): Mitochondria are known as the powerhouses of the cell.
Reason (R): Mitochondria are the sites of photosynthesis in plant cells.
 3. Assertion (A): Vacuoles are storage sacs found in animal cells.
Reason (R): Vacuoles store water, nutrients, and waste materials.
 4. Assertion (A): The cell wall is found in both plant and animal cells.
Reason (R): The cell wall provides structural support and protection to the cell.
- Project :- MAKE 3 D PROJECT ON DIFFERENT CELL ORGANELLES (Create three dimensional project on any organelle of your choice. (Use ecofriendly material)
Use different colours to show different parts of the organelle

SUBJECT: SOCIAL SCIENCE

1. Map work (Label and locate states and union territories with their capitals on India Map and paste in your notebook)
2. Complete the map practice work for History and Geography with proper labeling and neat presentation.
3. Complete and check your progress in your notebook. (Page no. 9 Civics textbook)
4. Write down some of the arguments in favour of democracy.
5. Write down the features of democracy.
6. What are the main causes of climate change? Explain.
7. Write 20 important History dates and the events. (Find out from your History textbook)
8. Prepare a project file on the topic 'Climate Change' using 15-20 A4-size sheets.
9. Learn and revise all the chapters already completed in the class room. (Geography and Civics)

SUBJECT- ARTIFICIAL INTELLIGENCE

Write the answers of the following questions in brief:

1. What is communication? Name any two elements of communication.
2. What are the 3Ps of communication? Explain any one.
3. Differentiate between verbal and non-verbal communication.
4. What is visual communication? Give two examples.

5. Mention any two advantages of written communication.
6. What is body language in non-verbal communication?
7. Why is feedback important in the communication process?
8. Give two examples each of verbal and visual communication.

Answer the following long answer type questions:

1. Explain the elements of communication with a suitable diagram or examples.
2. Describe the 3Ps of communication in detail. How do they help in improving communication skills?
3. Explain the 7Cs of effective communication with suitable examples.
4. Differentiate between verbal, non-verbal, visual, and written communication on the basis of features and uses.
5. Discuss the importance of communication skills in daily life and school life. Explain different modes of communication with examples.

THE END