

DAV Public School, DVC MTPS, Bankura
Summer Holiday Homework 2026

Class: XII

Subject: English

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- 1. How do the issues portrayed in the lessons Lost Spring and The Last Lesson continue to exist in present-day society? Prepare a research-based magazine article titled “Voices beyond Time” based on your personal analysis of the social issues discussed in the lessons.**

 - 2. How do fear, trauma, courage, and emotional conflict shape human behaviour in literature? Analyse the psychological journey of the characters from Deep Water and My Mother at Sixty-six in the light of the above question. Add a reflective commentary in the conclusion.**

 - 3. Why is the preservation of language and cultural heritage important in the modern world? Answer the question in relation to your understanding of The Last Lesson.**

 - 4. How does imagination help individuals escape from stress and reality? Using The Third Level as the base text, write a creative journal containing a comparative analysis between reality and fantasy.**

DAV PUBLIC SCHOOL, DVC, MTPS
SUMMER HOLIDAY ASSIGNMENT

CLASS: 12

SUBJECT: PHYSICS

Assertion Reason

For question numbers 1, 2 and 3 two statements are given- one labeled **Assertion (A)** and the other labeled **Reason (R)**. Select the correct answer to these questions from the codes (a), (b), (c) and (d) as given below:

- a) Both A and R are true, and R is correct explanation of the assertion.
- b) Both A and R are true, but R is not the correct explanation of the assertion.
- c) A is true, but R is false.
- d) A is false, and R is also false.

1. **Assertion(A):** Gauss's law cannot be used to calculate the electric field near an electric dipole.

Reason(R): Electric dipole does not have symmetrical charge distribution.

2. **Assertion (A):** A spherical balloon carries a positive charge that is uniformly distributed over its surface. As the balloon is blown up, the total electric flux coming out of the surface increases.

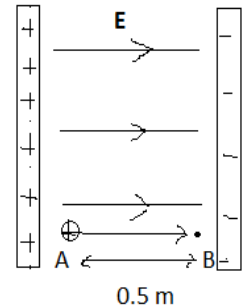
Reason (R): With the increase in surface area of the balloon its surface charge density increases.

3. **Assertion:** If a point charge q is placed in front of an infinite grounded conducting plane surface, the point charge will experience a force.

Reason: The force is due to the induced charge on the conducting surface which is at zero potential

Case Study

4. Potential difference (ΔV) between two points A and B separated by a distance x in a uniform electric field E is given by $\Delta V = -Ex$, where x is measured parallel to the field lines. If a charge q_0 moves from A to B, the change in potential energy (ΔU) is given as $\Delta U = q_0\Delta V$. A proton is released from rest in uniform electric field of magnitude 8.0×10^4 V/m directed along the positive X-axis. The proton undergoes a displacement of 0.50 m in the direction of E. Mass of a proton = 1.66×10^{-27} kg and its charge = 1.6×10^{-19} C.



With the help of the passage given above, choose the most appropriate alternative for each of the following questions.

i) As the proton moves from A to B, then

- (a) The potential energy of the proton decreases.
- (b) The potential energy of the proton increases.
- (c) The proton loses kinetic energy.
- (d) The total energy of the proton increases.

ii) The change in electric potential of the proton between the points A and B is

- a) 4.0×10^4 V
- b) -4.0×10^4 V
- c) 6.4×10^{-19} V
- d) 6.4×10^{-19} V

iii) The change in electric potential energy of the proton for displacement from A to B is

- a) -6.4×10^{-19} J
- b) 6.4×10^{-19} J
- c) -6.4×10^{-15} J
- d) 6.4×10^{-15} J

iv) The velocity of the proton after it has moved 0.50 m starting from rest is

- a) 1.6×10^8 m/s
- b) 2.77×10^4 m/s
- c) 2.77×10^6 m/s
- d) 1.6×10^6 m/s

v) If in place of charged plates, two similar point charges of $1 \mu\text{C}$ are kept in air then potential energy is

- a) 1 J
- b) 1 eV
- c) 9×10^{-3} J
- d) zero

5. Write the 6 activities in activity copy (lace bound practical copy) as shared with you and according to the instructions given.

DAV PUBLIC SCHOOL, DVC MTPS

SUMMER HOLIDAY ASSIGNMENT

CLASS-XII

Subject: Chemistry

Assertion- Reason:

For question numbers 1, 2 and 3 two statements are given- **Assertion (A)** and **Reason (R)**. Select the correct answer to these questions from the codes (a), (b), (c) and (d) as given below:

- (a) Both Assertion and Reason are true and Reason is the correct explanation for Assertion.
- (b) Both Assertion and Reason are true but Reason is not the correct explanation for Assertion.
- (c) Assertion is true and Reason is false.
- (d) Both Assertion and Reason are false.

- 1 **Assertion(A):** 0.1 M sucrose solution has higher depression in the freezing point than 0.1 M urea solution.
Reason(R): Depression in freezing point is not a colligative property.
- 2 **Assertion(A):** The process of halogenation of benzene takes place in the presence of anhydrous FeCl₃.
Reason(R): Anhydrous FeCl₃ prepares nucleophile to attack the benzene ring
- 3 **Assertion (A):** Specific conductivity of all electrolytes decreases on dilution.
Reason (R): On dilution, the number of ions per unit volume decreases.

Read the passage and answer the following questions:

Vishal set up an experiment to find the resistance of aqueous KCl solution for different concentrations at 298K using a conductivity cell connected to a Wheatstone bridge. He fed the Wheatstone bridge with A.C. power in the audio frequency range 550 to 5000 cycles per second. Once the resistance was calculated from null point, he also calculated the conductivity (κ) and molar conductivity (Λ_m) and recorded his readings in tabular form which is given below.

S.No.	Conc(M)	κ (S cm ⁻¹)	Λ_m (S cm ² mol ⁻¹)
1	1.00	111.3×10^{-3}	111.3
2	0.10	12.9×10^{-3}	129.0
3	0.01	1.41×10^{-3}	141.0

- 4 Why did the molar conductivity increase though the conductivity decreased with dilution?
- 5 If molar conductivity at infinite dilution ($\Lambda_0 m$) of KCl is $150.0 \text{ S cm}^2 \text{ mol}^{-1}$, calculate the degree of dissociation of 0.01 M KCl.
- 6 The conductivity of a 0.01M solution of acetic acid at 298 K is $1.65 \times 10^{-4} \text{ S cm}^{-1}$. Calculate the molar conductivity of the solution.

Investigatory Project:

You must include the following points in investigatory project-

1. Cover-page with name and logo of school, session, title of project, your name, board roll no. (Printed).
 2. Acknowledgement
 3. Certificate
 4. Index
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5. Aim of the project
6. Introduction
7. Materials/chemicals required
8. Procedure/Methodology
9. Experimentation/ Survey
10. Observation (tables)
11. Calculations
12. Result
13. Conclusion
14. Precautions
15. Suggestions for further investigations
16. Bibliography

Topics for investigatory project:

Roll nos.	Topic
1,6,11,16,21,26, 31,36,41,46,51	Study of common food Adulterants. (minimum 10 foods)
2,7,12,17,22,27, 32,37,42,47,52	To study the methods of purification of water.
3,8,13,18,23,28, 33,38,43,48,53	Preparation of soybean milk and its comparison with natural (cow/buffalo) milk, focusing on their nutritional composition, curd formation, and the effect of temperature.
4,9,14,19,24,29, 34,39,44,49	To Study the presence of oxalate ions in guava fruit at various stages of ripening
5,10,15,20,25,3 0,35,40,45,50	Comparative study of Commercial Antacids.

Homework should be done in separate h/w copy and project to be done in channel file.

DAV PUBLIC SCHOOL, DVC MTPS BANKURA

HOLIDAY HOME WORK (2026-2027)

Class XII Mathematics

Chapters: Relations & Functions, Matrices and Determinants

Relations and Functions

1. Let $A = \{1,2,3,4\}$ and $B = \{2,4,6,8\}$.

Define a relation R from A to B by $R = \{(x,y):y = 2x\}$

- (i) Write R in roster form.
- (ii) Find the domain and range of R .
- (iii) Represent the relation by an arrow diagram.
- (iv) Determine whether R is a function. Justify your answer.

2. Let $A = \{1,2,3\}$. Define a relation R on A as $R = \{(1,1),(2,2),(3,3),(1,2),(2,1)\}$

Examine whether R is:

- (i) Reflexive
- (ii) Symmetric
- (iii) Transitive

Hence determine whether R is an equivalence relation.

3. Let the function $f:R \rightarrow R$ be defined by $f(x) = 2x + 5$

- (i) Show that f is one-one.
- (ii) Show that f is onto.
- (iii) Hence prove that f is invertible.
- (iv) Find $f^{-1}(x)$.

4. Let $f(x) = x^2, x \in R$

- (i) Determine whether f is one-one and onto.
- (ii) Restrict the domain suitably so that f becomes invertible.
- (iii) Find the inverse function for the restricted domain.
- (iv) Draw the graphs of $f(x)$ and $f^{-1}(x)$.

Matrices

5. Given the matrices $A = \begin{bmatrix} 2 & -1 \\ 3 & 4 \end{bmatrix}, B = \begin{bmatrix} 1 & 5 \\ 2 & -3 \end{bmatrix}$

find: (i) $A + B$ (ii) $A - B$ (iii) AB (iv) BA

Hence show that matrix multiplication is not commutative.

6. Solve the following system of equations using matrix method:

$$\begin{aligned} 2x + y - z &= 8 \\ -3x - y + 2z &= -11 \\ -2x + y + 2z &= -3 \end{aligned}$$

DAV PUBLIC SCHOOL DVC MTPS

CLASS-XII

Biology Holiday homework

1. During microsporogenesis, meiosis occurs in :
 - (a) Endothecium
 - (b) Microspore mother cells
 - (c) Microspore tetrads
 - (d) Pollen grains.
2. In a fertilised embryo sac, the haploid, diploid and triploid structures are :
 - (a) Synergid, zygote and primary endosperm nucleus
 - (b) Synergid, antipodal and polar nuclei
 - (c) Antipodal, synergid and primary endosperm
 - (d) filiform apparatus, hilum and egg
3. Identify the wrong statement from the following:
 - (a) High levels of estrogen triggers the ovulatory phase
 - (b) Oogonial cells start to proliferate and give rise to functional ova in regular cycles from puberty onwards.
 - (c) Sperms released from seminiferous tubules are poorly motile/non-motile
 - (d) Progesterone level is high during the post-ovulatory phase of menstrual cycle.
4. In angiospermic plant before formation of microspore sporogenous tissue undergo cell division
 - (a) Name the type of cell division.
 - (b) What would be the ploidy of the cells of tetrad?
5. An analysis of a pregnant woman's blood at week 34 of gestation shows a significant drop in progesterone and estrogen levels due to a localized placental insufficiency. Why is a steady, high concentration of these hormones critical at this stage of pregnancy?
6. In a laboratory experiment studying decomposition, two separate leaf litter samples are monitored under identical temperature and moisture conditions. Sample A consists of fallen oak leaves rich in lignin and chitin, while Sample B consists of legume leaves rich in nitrogen and water-soluble substances. What will researchers observe regarding their rates of decomposition?

INVESTIGATORY PROJECT-

Follow the given guidelines for investigatory project-

1. Coverpage with name of school, session, title of project, your name, board roll no. (Printed).

2. Acknowledgement
3. Certificate
4. Index
5. Introduction
6. Why is the project is selected?
7. Literature Review
8. Research objectives
9. Procedure/Methodology
10. Experimentation/ Survey
11. Result Analysis
12. Conclusion
13. Futuristic approach
14. Bibliography (2-14 hand written).

Topics for investigatory project-

- 1. Comparative study of effects of manures, fertilizers and organic farming in agriculture. Roll no. 4, 26,35,50**
- 2. *Eichhornia*- a deadly killer to most wanted weed. Roll no 6,16, 38,51**
- 3. Diabetes- Occupational or life style effect (a survey report) . Roll no 8,18,29,52**
- 4. Presence of nutrients in the algal bloom and its utilization in horticulture. Roll no 10,20,30,44**
- 5. Economical value of five plants available in our school campus. Roll no 11,22,31,45**
- 6. Biofuel a substitute of petrol / diesel . Roll no 12,24,32,46**
- 7. Study of different types of pollen grains and make comparative cahrt of the structure and the germ pores. Roll no 13,25,33,49**
- 8. Study on Probiotics and their Preparation. Roll no-15,28,40,53**

Homework should be done in separate h/w copy and project to be done in channel file.

D.A.V. Public School, DVC MTPS, Bankura
Summer Holiday Homework- 2026

Class: XII

Subject: Painting / Fine Arts (Code 049)

Theory UNIT -1

1. Define "Ragamala" paintings and explain their artistic significance.
2. State any two distinctive artistic features of the Kishangarh Sub-School.
3. Why is the painting 'Maru Ragini' historically significant in tracing Rajasthani art history?
4. Mention two key stylistic traits of the Mewar Sub-School of painting.
5. What major thematic shift occurred in Mewar painting during the 18th century?
6. How did the Pahari School of painting evolve historically?
7. Identify the key differences between the Basohli and Kangra sub-schools
8. How is nature represented in Pahari miniature paintings?
9. Trace the origin, development, and main aesthetic characteristics of the Rajasthani School of Miniature Painting
10. Analyze the miniature painting 'Radha (Bani Thani)' of the Kishangarh Sub-school based on its specific structural parameters.
11. Discuss the origin and development of the Pahari School. Critically evaluate how the Basohli and Kangra sub-schools differ stylistically.
12. Who painted the famous Rajasthani masterpiece 'Radha (Bani Thani)'?
13. Describe the aesthetic depiction of the sky and water in the Rajasthani painting Krishna on Swings.
14. How does the painting Nand, Yashoda and Krishna with Kinsmen Going to Vrindavan show a sense of movement?
15. The main features of the Bikaner Sub-school of Rajasthani Painting

CLASS 12 PAINTING PRACTICAL HOMEWORK

Portfolio Preparation & Nature Study

 **Assignment 1. Nature and Object Study (Still Life)**

Total Works: 5 sheets.

Topics: Group of man-made and natural objects (e.g., a water jug, a plate with fruits/vegetables like onions, a flower vase, or geometrical forms like blocks and cylinders).

3 sheets done strictly using pencil shading (focusing on light, shadow, cross-hatching, and perspective).

2 sheets done in watercolors or oil pastels.

Surface: 1/4 size drawing sheet or practical sketchbook.

Assignment 2. Painting Composition (Imaginative Art)

Total Works: 5 sheets.

Topics: Original scenes reflecting daily life, environment, or festival celebrations.

Pick from common themes like:

A village scene or rainy day.

A festival celebration (e.g., Diwali or Holi).

A marketplace or playground scene.

A modern/monochrome adaptation of classic themes like "Mother and Child" or "Gautam Buddha".

Media: Poster colors, watercolors, acrylics, or mixed media on 1/4 size art paper

Assignment 3. Indian Folk Art

Total Works: 2 sheets.

Topics: Traditional Indian tribal and folk styles. Choose from:

Madhubani Painting (Mithila art using vibrant colors and double lines).

Warli Art (Maharashtra tribal stick figures using geometric shapes).

Pattachitra or Gond painting styles.

Surface: 1/4 size drawing sheet or practical sketchbook.

Submission Guidelines

Border: Leave a 2.5 cm neat border on all sides of each sheet.

Details: Write your Name, Roll Number, Class, and Date on the bottom-right corner.

D.A.V. PUBLIC SCHOOL, DVC, MTPS
Summer Holiday Home Work 2026

Class : XII

Subject :Physical Education

Q.NO.	QUESTION
1.	<p>Riya, a young athlete, started skipping meals to reduce body weight quickly before a competition. After some time, she developed weakness and irregular menstrual cycles.</p> <p>Questions:</p> <ol style="list-style-type: none">1. Which condition is indicated here?2. Name one health risk involved.3. Suggest two preventive measures.
2.	<p>Assertion (A): Proper planning is essential for successful sports events. Reason (R): Different committees perform specific responsibilities.</p> <p>(a) Both A and R are true and R is the correct explanation of A. (b) Both A and R are true but R is not the correct explanation of A. (c) A is true but R is false. (d) A is false but R is true.</p>
3.	<p>Neha, a Physical Education teacher, is planning to organize a Zonal Athletics Meet in her school. She wants to ensure proper time management, smooth conduct, and active participation.</p> <p>Answer the following questions:</p> <ol style="list-style-type: none">1. Why is planning important before organizing such a big event?2. Which type of tournament is best for athletics events and why?3. Mention two committees Neha must form and their responsibilities.4. What are the objectives of tournament planning?5. How does planning help in reducing errors during the event?
4.	<p>The physical education teacher of DAV Public School is planning the Annual Sports Day. She wants to ensure maximum participation, smooth conduct of events, and proper management of resources. She has decided to follow systematic planning which includes budgeting, choosing the right dates, preparing a fixture, and assigning duties to teachers and student volunteers.</p> <p>Based on the above case, answer the following questions:</p> <ol style="list-style-type: none">1. Which type of planning is being followed by the teacher? <p>a) Long-term planning b) Short-term planning c) Contingency planning d) None of the above</p>

5.	<p>The female athlete triad includes:</p> <p>(a) Obesity, diabetes, hypertension (b) Amenorrhea, osteoporosis, eating disorders (c) Stress, anxiety, depression (d) Asthma, fatigue, dehydration</p>
6	<p>Prepare a league fixture using the tabular method for 6 teams participating in an inter-house football tournament</p>
7	<p>avi, a 17-year-old student, often complains of back pain and is observed walking with a hunched back. His Physical Education teacher suspects that he might have a postural deformity.</p> <p>Answer the following questions based on the given situation:</p> <ol style="list-style-type: none"> 1. Name the postural deformity Ravi is likely suffering from. 2. Mention any two causes of this deformity. 3. Suggest two corrective measures or exercises for his condition. 4. List any two other common postural deformities. 5. Why is it important to correct postural deformities at an early age?
	<p>*PRACTICAL- PROCEDURE FOR ASANAS, BENEFITS AND CONTRADICATION FOR ANY FIVE ASANAS FOR EACH LIFESTYLE DISEASE.</p>

**DAV PUBLIC SCHOOL, DVC, MTPS
SUMMER HOLIDAY ASSIGNMENT**

CLASS:-12

SUBJECT: COM. SC.

01	<p>Guess the output of given code . a = "Year 2022 at All the best" a = a.split('2') b = a[0] + ". " + a[1] + ". " + a[3] print (b)</p>
02	<p>ASSERTION AND REASONING based question Mark the correct choice as (a) Both A and R are true and R is the correct explanation for A (b) Both A and R are true and R is not the correct explanation for A (c) A is True but R is False (d) A is false but R is True</p> <p>Assertion (A):- If the arguments in function call statement match the number and order of arguments as defined in the function definition, such arguments are called positional arguments.</p> <p>Reasoning (R):- During a function call, the argument list first contains default argument(s) followed by positional argument(s).</p>
03	<p>Define a function to calculate rate of interest having Principal, Rate and Interest as default parameter. Write different function calls with one , two, three arguments.</p>
04	<p>Compute the greatest common divisor and least common multiple of two integers using two different user defined functions.</p>
05	<p>Define a function to determine and return largest and smallest number in a list.</p>
06	<p>Determine whether a number is a perfect number, an Armstrong number or a palindrome using three different user defined functions.</p>