

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

**Class: XI**

**Subject: English**

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- 1. Create a mind-map showing the contrast between tradition and modernity in the chapter The Portrait of a Lady**
  
  - 2. Research how the role of grandparents in Indian families has changed over the last 50 years. Present your findings through a poster or infographic.**

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

CLASS: XI

SUBJECT: PHYSICS

**MCQ: Choose the correct option**

1. The number of significant figures in  $(3.20 + 4.80) \times 10^5$  is,

- (a) 2                      (b) 3                      (c) 4                      (d) 5

2. Three quantities K, L and M are given such that the dimension of  $[KL] = \text{dimension of } [M]$ . Which of the following expressions can be considered meaningful?

- (a)  $L\left(\frac{K}{M} - L\right)$                       (b)  $\frac{\left(\frac{M}{K} - L\right)}{K}$                       (c)  $\frac{MK-L}{K}$                       (d)  $\frac{K-M}{KL+M}$

3. If velocity v, acceleration A and force F are chosen as fundamental quantities, then the dimensional formula of angular momentum in terms of v, A and F would be

- (a)  $FA^{-1}v$                       (b)  $Fv^3A^{-2}$                       (c)  $Fv^2A^{-1}$                       (d)  $F^2v^2A^{-1}$

4. In a new unit system proposed, the unit of mass is ' $\alpha$ ' kg, unit of length is ' $\beta$ ' m and unit of time is ' $\gamma$ ' s. In this new system 5 J is measured as,

- (a)  $\frac{5\gamma^3}{\alpha\beta^3}$                       (b)  $\frac{5\gamma^2}{\alpha\beta^2}$                       (c)  $\frac{5\gamma^3}{\alpha\beta^2}$                       (d)  $\frac{5\gamma^2}{\alpha^2\beta}$

5. The position 'x' of particle as a function of time 't' is given as,

$x = \frac{V_0}{a}(1 - e^{-at})$ , where  $V_0$  is constant and  $a > 0$ . The dimensions of  $V_0$  and a are,

- (a)  $[M^0LT^{-2}]$  and  $[T^{-1}]$                       (b)  $[ML^0T^{-2}]$  and  $[T]$   
(c)  $[M^0LT^{-1}]$  and  $[T]$                       (d)  $[M^0LT^{-1}]$  and  $[T^{-1}]$

**Case Study:**

**For question numbers 6 and 7 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.

6. **Assertion(A):** The dimensions of  $a/b$  in the equation  $P = \frac{a-t^2}{bx}$ , where P is pressure, x is distance and t is time, are  $[MT^{-2}]$

**Reason(R):** By Principle of homogeneity the dimensions of LHS is equal to dimensions of RHS.

7. **Assertion(A):** 7.345 can be round off to 7.35.

**Reason(R):** According to the rule, if a digit to be dropped is 5 then preceding digit is increased by 1 if it is even.

8. Expression of kinetic energy can be written as,  $K = \frac{1}{2}mv^2 = \frac{p^2}{2m}$

Show graphically the variation of,

- (i) K versus m for constant v.  
(ii) K versus v for constant m  
(iii) K vs p for constant m  
(iv) K vs  $1/m$  for constant p

# DAV PUBLIC SCHOOL, DVC MTPS

## Summer Holiday Homework

CLASS-XI

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):** The Bohr model accurately predicts the frequencies of the emission lines for a  $\text{He}^+$  ion, but it completely fails to explain the spectrum of a neutral He atom.  
**Reason (R):** Bohr's theory assumes a single-electron system and cannot account for the inter-electronic repulsions that exist in multi-electron atoms
- 2 **Assertion (A):** When comparing the absorption spectrum and the emission spectrum of the same element, the dark lines in the absorption spectrum appear at the exact same wavelengths as the bright lines in the emission spectrum.  
**Reason (R):** The energy absorbed by an electron to transition to a higher energy state is strictly quantized and is equal to the energy of the photon emitted when it falls back down to its original state
- 3 **Assertion (A):** The formation of water ( $\text{H}_2\text{O}$ ) and hydrogen peroxide ( $\text{H}_2\text{O}_2$ ) from hydrogen and oxygen is a valid illustration of the Law of Multiple Proportions.  
**Reason (R):** The masses of oxygen (16 g and 32 g) that combine with a fixed mass of hydrogen (2 g) in these compounds bear a simple whole-number ratio of 1:2.

### Answer the following questions:

- 4 If 4 g of NaOH dissolves in 36 g of  $\text{H}_2\text{O}$ , calculate the mole fraction of each component in the solution. Also, determine the molarity of solution (specific gravity of solution is  $1\text{g mL}^{-1}$ )?
- 5 The Balmer series in the hydrogen spectrum corresponds to the transition from  $n_1=2$  to  $n_2=3,4,\dots$ . This series lies in the visible region. Calculate the wave number of line associated with the transition in Balmer series when the electron moves to  $n = 4$  orbit. ( $R_H = 109677\text{ cm}^{-1}$ )
- 6 Table-tennis ball has a mass 10 g and a speed of 90 m/s. If speed can be measured within an accuracy of 4% what will be the uncertainty in speed and position?
- 7 The reactant which is entirely consumed in reaction is known as limiting reagent. In the reaction  $2\text{A} + 4\text{B} \rightarrow 3\text{C} + 4\text{D}$ , when 5 moles of A react with 6 moles of B, then (i) which is the limiting reagent? (ii) calculate the amount of C formed?

### Project:

Prepare a mind map on Quantum Numbers and related laws required for writing electronic configuration of elements.

**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: XI

Sub: Mathematics

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### SECTION - A

- Two finite sets have  $m$  and  $n$  elements. The number of subsets of the first set is 112 more than that of second set. The values of  $m$  and  $n$  are respectively:  
(a) 4, 7                      (b) 7, 4                      (c) 4, 4                      (d) 7, 7
- Let  $A$  and  $B$  be two sets such that  $n(A) = 20$ ,  $n(B) = 10$ ,  $n(A \cup B) = 15$ . Then,  $n(A \cap B)$  is equal to:  
(a) 30                      (b) 40                      (c) 15                      (d) none of these
- Range of the function  $f(x) = \frac{x}{x+2}$  is  
(a)  $\mathbb{R}$                       (b)  $\mathbb{R} - \{2\}$                       (c)  $\mathbb{R} - \{1\}$                       (d)  $\mathbb{R} - \{-2\}$
- Let  $A = \{x : x \in \mathbb{R}, x > 6\}$  and  $B = \{x \in \mathbb{R} : x < 9\}$ . Then,  $A \cap B$  is equal to:  
(a)  $(7, 8]$                       (b)  $(7, 8)$                       (c)  $[7, 8)$                       (d)  $[7, 8]$
- If  $\alpha + \beta = \frac{\pi}{4}$ , then the value of  $(1 + \tan \alpha)(1 + \tan \beta)$  is  
(a) 1                      (b) 2                      (c) -2                      (d) none of these
- If  $[x]^2 - 5[x] + 6 = 0$ , where  $[ ]$  denote the greatest integer function, then  
(a)  $x \in [3, 4)$                       (b)  $x \in [2, 3)$                       (c)  $x \in [2, 3)$                       (d)  $x \in [2, 4)$
- If  $R$  is a relation on the set  $A = \{1, 2, 3, 4, 6, 7, 8, 9, 11, 12\}$  given by  $x R y \Leftrightarrow y = 2x$ , then  $R$  is equal to:  
(a)  $\{(2, 1), (4, 2), (8, 2), (9, 3)\}$                       (b)  $\{(2, 1), (4, 2), (6, 3)\}$   
(c)  $\{(5, 1), (2, 4), (3, 6)\}$                       (d) none of these
- Let  $S = \{x : x \text{ is a positive multiple of } 3 \text{ less than } 100\}$ ,  $P = \{x : x \text{ is a prime number less than } 20\}$ . Then  $n(S) + n(P)$  is:  
(a) 34                      (b) 41                      (c) 33                      (d) 30
- The value of  $\sin 50^\circ - \sin 70^\circ + \sin 10^\circ$  is  
(a) 1                      (b) 0                      (c) 1                      (d) 2
- If  $\cos x + \sqrt{3} \sin x = 2$ , then the value of  $x$  is:  
(a)  $\pi/3$                       (b)  $2\pi/3$                       (c)  $4\pi/3$                       (d)  $5\pi/3$

### SECTION - B

- Prove the following :  $\sin 10^\circ + \sin 20^\circ + \sin 40^\circ + \sin 50^\circ = \sin 70^\circ + \sin 80^\circ$ .
- Find the domain and the range of the function :  $f(x) = \sqrt{x^2 - 4}$
- Let  $P$  and  $Q$  be sets, if  $P \cap X = Q \cap X = \phi$  and  $P \cup X = Q \cup X$  for some set  $X$ . Show that  $P = Q$ .
- If  $\alpha, \beta$  are two distinct roots of the equation  $a \tan \theta + b \sec \theta = c$ , prove that  $\tan(\alpha + \beta) = \frac{2ac}{a^2 - c^2}$
- Let  $A = \{-2, -1, 0, 1, 2\}$  and  $f : A \rightarrow Z$  be given by  $f(x) = x^2 - 2x - 3$ . Find:  
(a) the range of  $f$   
(b) pre-images of 6, -3 and 5.

### PROJECT WORK

Prepare a mind map in A4 size paper of the chapters Sets, Relation and Functions, Trigonometric functions.

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

**Class: XI**

**Subject: Painting / Fine Arts (Code 049)**

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**Theory- UNIT -1**

1. Mention the materials and colors used by prehistoric artists to make cave paintings.
2. What is the significance of the Upper Palaeolithic paintings found in India?
3. Write a short note on the "Dancing Girl" sculpture found at Mohenjodaro.
4. Describe the artistic features of the "Male Torso" found at Harappa.
5. Explain the material and features of the "Bull Seal" from the Indus Valley Civilization.
6. What are the "Six Limbs of Indian Painting" (Shadang)?
7. Define "Composition" as a principle of visual art.
8. Give a detailed description of the Prehistoric Rock Paintings of Bhimbetka, covering their location, discovery, style, and major themes.
9. What are the major themes depicted in the Bhimbetka cave paintings?
10. Describe the "Mother Goddess" terracotta figurine. Discuss its discovery, material, unique design elements, and religious significance.
11. Trace the development of early pottery in the Indus Valley Civilization. Discuss its manufacturing process, color schemes, and decorative patterns.

12. What is the "Bearded Priest" sculpture? Give a detailed aesthetic appraisal of this piece from Mohenjo-daro.
13. How did geographic factors and the environment influence the lifestyle and art of the Paleolithic and Mesolithic people as seen in Indian rock art?
14. Discuss the use of animal motifs across both Prehistoric Rock Paintings and Indus Valley Artifacts. Contrast how animals were treated artistically in these two eras.
15. Mention the two distinct styles of human figures found in Bhimbetka cave paintings.
16. Why is the "Pashupati Seal" historically important?
17. What does the element "Texture" mean in a painting?
18. Explain the structural layout, artistic patterns, and utility of the "Perforated Jar" found in the Indus Valley Civilization.
19. Detail the stylistic differences between the paintings of the Upper Palaeolithic period and the Mesolithic period found in Indian rock shelters.
20. What is the role of the element "Color" in Indian Art? Explain how prehistoric cave painters and Indus Valley artisans applied color to express their artistic intent.

## **CLASS 11 PAINTING PRACTICAL HOMEWORK**

Portfolio Preparation & Nature Study

 **Assignment 1.** Draw one still-life arrangement containing at least three everyday objects.

Total Works: 2 sheets.

Objects to use: A water bottle, a fruit bowl, and a book.


Medium: Graphite pencils (2B, 4B, 6B) or monochrome shading.

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

Correct proportions and placement.

Realist light and shadow rendering.

Depiction of different textures (glass, plastic, paper).

 **Assignment 2: Landscape Study** Paint a landscape scene based on direct observation or a photograph.

Total Works: 2 sheets.

Theme: "Early Morning in a Village" & "A Quiet City Street".

Medium: Watercolours, poster colours, or oil pastels.

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

Key Focus:

Perspective (foreground, middle ground, background).

Colour blending to show atmospheric light.

Clean brushwork and composition balance.

 **Assignment 3: Composition / Creative Work**

Total Works: 2 sheets.

Task: Create an original composition based on human figures.

Theme: "A Festival Celebration" & "Market Scene".

Medium: Choice of multi-media (Watercolours/Acrylics/Inks).

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

Key Focus:

Anatomy and proportional human figures.

Use of vibrant, expressive color schemes.

Storytelling through visual elements.

 **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 : XI**

**Subject :Physical Education**

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Q.NO.	QUESTION
1.	which career in Physical Education mainly focuses on injury prevention and rehabilitation? (a) Sports Journalism (b) Sports Physiotherapy (c) Sports Management (d) Sports Nutrition
2.	Showing respect to opponents reflects: (a) Poor sportsmanship (b) Olympic spirit (c) Weakness (d) Fear
3.	The increasing use of technology in sports is an example of: (a) Traditional education (b) Changing trend in Physical Education (c) Recreation (d) None of these
4.	Which organization conducts the Olympic Games? (a) FIFA (b) ICC (c) IOC (d) BCCI
5.	What are the elements of Yoga? Explain any two elements of Yoga.
6	Write a short note on meditation.
7	Write a short note on Samadhi.
	<b>*PRACTICAL- FITNESS TESTS ADMINISTRATION (SAI Khelo India Test)</b>

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

**CLASS:-11**

**SUBJECT: COM. SC.**

**01. Categorise the following data as structured, semi structured and unstructured:**

- Newspaper
- Cricket Match Score
- HTML Page
- Patient records in a hospital

**02. Identify the category (system, application, and programming tool) of the following software:**

- a) Compiler
- b) Assembler
- c) Ubuntu
- d) Text editor

**03. What is the primary role of system bus? Why data bus is bidirectional while address bus is unidirectional?**

**04. Write the main difference between microcontroller and microprocessor. Why do smart home appliances have a microcontroller instead of microprocessor embedded in them?**

**05. Write the corresponding Python assignment statements:**

- a) Assign 10 to variable length and 20 to variable breadth.
- b) Assign the average of values of variables length and breadth to a variable sum.
- c) Assign a list containing strings 'Paper', 'Gel Pen', and 'Eraser' to a variable stationery.
- d) Assign the strings 'Mohandas', 'Karamchand', and 'Gandhi' to variables first, middle and last.
- e) Assign the concatenated value of string variables first, middle and last to variable fullname. Make sure to incorporate blank spaces appropriately between different parts of names.

**06. Which data type will be used to represent the following data values and why?**

- a) Number of months in a year
- b) Resident of Delhi or not
- c) Mobile number
- d) Pocket money
- e) Volume of a sphere
- f) Perimeter of a square
- g) Name of the student
- h) Address of the student