DAV PUBLIC SCHOOL ,PTPS PATRATU

HOLIDAY HOMEWORK(2026-27)

CLASS XI SC

ENGLISH

Q1. Fill in the blanks with suitable forms of the verbs given in the brackets

The newspaper recently _____ (carry) a report of a man in search of his newly born twin. The babies were missing at the hospital where his wife _____ (give) birth to them. The hospital authorities _____ (claim)that the babies _____ (die)but they refused to handover _____ (their/there) bodies .Now, the unfortunate father _____ (lodge) a complaint with the police.

Q2. You are Chandan Dwivedi of sector 5, Noida, wishing to put your 3 BHK flat on rent. Draft a classified advertisement for the same ,giving all details and amenities.

Q3. Describe Khushwant's grandma in detail. Why does she appear like a winter landscape in the mountains?

Q4. " we are not afraid to die " is a story of togetherness and its power' Discuss.

Q5. Grandmother accepted her seclusion with resignation implies_

a. Grandmother resigned from her job
b. Grandmother secluded herself from the family in revolt
c. Grandmother accepted her isolation by by retiring from all family affairs
d. None of these.

Q6. The overall tone of the poet in the poem Photograph is that of

a. Dejection
b. Rejoice
c. Nostalgia
d. Peace and calm

Q7. Prepare a report on the increasing number of abandoned parents and their plight in our society, giving case studies and current data. In A4 size paper with pictures and illustrations.

CHEMISTRY

SECTION A: BASIC CONCEPT

1. What is the modern periodic law
2. Define atomic radius ,ionic radius and covalent radius
3. What is ionization enthalpy

SECTION B:SHORT QUESTION

1 Why does atomic size decrease across a period

2. why are alkali metals highly reactive

3. What is shielding effect

SECTION C:NUMERICAL PROBLEM

1. Arrange in increasing order of atomic size
   N,O,F

2.Which has higher electronegativity and why
   Na,Mg,Al

3.identify the elements with higher electron affinity in a period

SECTIOND: DIAGRAM

Make a large chart of periodic table with trends

2.create a mind map of periodic trends

MATHS

PREPARE PROPER NOTEBOOK.

Section A: Sets

1. Define the following with suitable examples:
   a) Set
   b) Roster form and Set-builder form
   c) Empty set
   d) Finite and Infinite sets

2. Write the following sets in roster form:
   a) A = {x : x is a natural number less than 10}
   b) B = {x : $x^2 < 25$, x ∈ ℕ}

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3. Identify the type of sets:
   a) A = {1, 2, 3}, B = {3, 2, 1}
   b) A = {x : x is even}, B = {2, 4, 6}

4. Check whether the following sets are equal:
   a) $A = \{1,2,3\}$, $B = \{3,2,1\}$
   b) $A = \{x : x^2 = 4\}$, $B = \{-2, 2\}$

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5. Let $A = \{1,2,3,4\}$, $B = \{3,4,5,6\}$. Find:
   a) $A \cup B$
   b) $A \cap B$
   c) $A - B$
   d) $B - A$

6. Verify De Morgan's Laws using sets:
   $(A \cup B)' = A' \cap B'$

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7. In a class of 50 students:
   - 30 like Math's
   - 25 like Science
   - 10 like both

   Find:
   a) Students who like only Math's
   b) Students who like only Science
   c) Students who like neither

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8. Prove that:
   $A - (B \cup C) = (A - B) \cap (A - C)$

9. If $A \subseteq B$, prove that $A \cap B = A$

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10. In a survey of 100 students:

- 60 like Cricket
- 45 like Football
- 25 like both

Answer:
a) How many like only Cricket?
b) How many like only Football?
c) How many like neither?
d) Represent using Venn diagram

Section B: Relations

1. Define:
   a) Relation
   b) Domain and Range
   c) Cartesian Product

2. If A = {1,2} and B = {3,4}, find A × B

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4. Represent the relation R = {(1,2), (2,3), (3,1)} using:
   a) Arrow diagram
   b) Matrix form

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6. Find domain and range of R. Also find inverse relation of R
   R = {(1,2), (2,3), (3,4)}

7. If A has 3 elements and B has 2 elements, find number of relations from A to B.

Section C: Competency-Based Questions

1. If n(A) = 3 and n(B) = 4, find n(A × B).

2. If A = {1,2,3} and B = {2,3,4}, verify: A ∪ B = B ∪ A.

3. How many subsets does a set with 5 elements have?

BIOLOGY

1)What are the three different classes of fungi and how do they differs from each other?

2)Who has given the Five Kingdom classification ? What are criteria for five kingdom classification?

3)What do you mean by morphology? What are the major regions of roots explain with diagram?

4)What is taxonomy? What are different levels of hierarchy?

5)Write the floral formula, floral diagram and general characters of family solanace.

6)What is the difference between Archaebacteria and Eubacteria?

***write all these answers in biology notebook and learn it.**

PHYSICS

SECTION A – BASIC CONCEPT QUESTIONS

1. Define physical quantity with examples.
2. Differentiate between fundamental and derived quantities.
3. What are SI units? Why are they internationally accepted?
4. Define dimensions of a physical quantity.
5. What is dimensional formula?
6. Write the dimensional formula of:
    - Velocity
    - Acceleration
    - Force
    - Momentum
    - Energy
    - Power
    - Pressure
    - Gravitational constant

□ SECTION B – DIMENSIONAL FORMULA UESTIONS

Find the dimensional formula of the following quantities:

1. Work
2. Impulse
3. Surface tension
4. Young's modulus
5. Stress
6. Strain
7. Angular momentum
8. Torque
9. Gravitational potential energy
10. Frequency
11. Electric current
12. Charge
13. Density
14. Universal gravitational constant
15. Planck's constant

□ SECTION C – APPLICATION OF DIMENSIONAL ANALYSIS

1. Verify the correctness of the following equations using dimensional analysis:

(a) v = u+at

(b) s =ut+1/2at^2

(c) F=ma

(d) P=W/t

(e) E=mc^2

2. Using dimensional analysis, derive the relation for the time period of a simple pendulum depending on:

- Length of pendulum
- Acceleration due to gravity

3. Using dimensional analysis, derive the expression for velocity of waves depending on:

- Frequency
- Wavelength

4. Derive the dimensional formula of gravitational constant using Newton's law of gravitation.

5. Show that pressure and stress have the same dimensions.

□ SECTION D – ASSERTION & REASON QUESTIONS

1.

Assertion (A):

Two quantities having same dimensions may not represent the same physical quantity.

Reason (R):

Dimensions only indicate the nature of quantity, not its complete physical meaning.

2.

Assertion (A):

Dimensional analysis cannot determine numerical constants.

Reason (R):

Dimensionless constants have no dimensions.

3.

Assertion (A):

The equation of motion can be checked using dimensional analysis.

Reason (R):

Both sides of a physical equation must have same dimensions.

4.

Assertion (A):

Dimensional analysis helps in unit conversion.

Reason (R):

Dimensions remain same in all systems of units.

□ SECTION E – COMPETENCY-BASED NUMERICAL QUESTIONS

1. The velocity of a particle is given by:

$v=at^2+bt+c$

Find the dimensions of:

- a
- b
- c

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2. The displacement of a particle is given by:

$x=A\sin(\omega t+kx)$

Find the dimensions of:

- A
- ω
- k

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3. A student proposes the equation:

F=mv^2

Check whether the equation is dimensionally correct.

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4. The energy stored in a stretched wire depends on:

- Length
- Force applied
- Area of cross-section

Use dimensional analysis to derive the relation.

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5. The drag force acting on a sphere depends upon:

- Radius of sphere
- Velocity of sphere
- Viscosity of liquid

Use dimensional analysis to derive the formula.

□ SECTION F – HIGHER ORDER THINKING SKILLS (HOTS)

1. Why is dimensional analysis called a "consistency test" for physical equations?
2. Explain why two quantities having same dimensions may still differ physically.
3. Why can dimensional analysis not derive trigonometric or exponential equations?
4. Explain the limitations of dimensional analysis with suitable examples.
5. Why are dimensionless quantities important in physics?
6. How does dimensional analysis help scientists in deriving new equations?
7. Can dimensional analysis predict the exact form of physical laws? Explain.
8. Why are constants like π and numerical factors not obtained through dimensional analysis?

□ SECTION G – UNIT CONVERSION QUESTIONS

Convert the following using dimensional method:

1. Convert 72 km/h into m/s.
2. Convert density from g/cm³ to kg/m³.
3. Convert pressure from dyne/cm² to N/m².
4. Convert 1 horsepower into watt.
5. Convert acceleration from cm/s² to m/s².

IP(065)

1	Complete your notecopy
2	Write a Python Code To calculate Simple and Compound interest.
3	Write a Python Code To calculate profit-loss for a given Cost and Sell Price.
4	Write a Python code to find the Area Rectangle ,Sqaue.
5	Write a python code to convert meter into centimeter.