

DAV PUBLIC SCHOOL, IFFCO, PARADEEP

HOLIDAY HOME WORK STD – XI

HINDI	<ol style="list-style-type: none"> 1. अस्पताल के प्रबंधन पर असंतोष व्यक्त करते हुए अस्पताल के चिकित्सा अधीक्षक को पत्र लिखिए- 2. दैनिक हिंदुस्तान समाचार पत्र में संवाददाता के पद के लिए आवेदन पत्र लिखिए- 3. हिंसा प्रधान फिल्मों को देखकर बालमन पर पड़ने वाले दुष्प्रभाव की समस्या का वर्णन करते हुए किसी दैनिक समाचार संपादक को पत्र लिखिए – 4. अपने विद्यालय के प्रधानाचार्य को पत्र लिखिए जिसमें कंप्यूटर शिक्षा की व्यवस्था की गई हो । 5. घटना लेखन –(क) बाल मजदूरी (ख) जल संकट (ग) प्राकृतिक आपदाएँ (घ) संचार क्रांति 6. 'नमक का दरोगा' पाठ के सभी प्रश्नों के उत्तर लिखिए- प्रश्न १ से १० ।
ENGLISH	<ol style="list-style-type: none"> 1. Syllabus for PSVT <ol style="list-style-type: none"> a. The Portrait of a lady b. Photograph c. We're Not afraid to die.... If we can All be Together d. Notice e. Tenses/Integra f. Reading Comprehension 2. Different types of notices – 5 3. Different types of Advertisements – 5 4. Read newspaper every day and note down 5 important news (everyday) in a separate notebook 5. Poster Making – 5
MATHS	<ul style="list-style-type: none"> • Solve all NCERT book problems of chapter – 1 & 3.in HW copy. • Solve all the problems of Ch.1 and Ch.3 from Exemplar in a separate copy. • Prepare 20 MCQs from Ch.1 and Ch.3 each of your own.
BIOLOGY	<p>Q.1 Download the Questionnaire attached here and solve it in your Biology H.W copy.</p> <p>Q.2 Complete the record writing in Biology practical record copy of all the experiments according to your Syllabus without mentioning the dates.</p> <p>Q.3 Solve Biology NCERT Exemplar of Chapter 1,2 & 3 in Bio H.W copy.</p> <p>Q.4 Read Chapter 1,2 & 3 thoroughly & prepare at least 5, 5 & 10 Unique VSA type Questions from each Chapter respectively with one word or one short sentence answer.</p> <p>Q.5 Prepare a Herbarium of any plant of your choice and mention its detail in the right hand side lower corner along with your name.</p> <p>Q.6 Prepare in a half drawing sheet longitudinally , the Life cycle Patterns shown by Plant Kingdom . Use colours to make your chart attractive and draw within borders and mention your name in the corner.</p>
PHYSICS	<ol style="list-style-type: none"> 1. Download the questionnaire attached here and solve them in HW copy. 2. Prepare 10 VSAQ/ MCQ of your own from each chapter taught in class. 3. Solve all the questions of ch-1 from NCERT book Exemplar.
CHEMISTRY	<ol style="list-style-type: none"> 1. Download the question attached herewith and solve them in the HW notebook. 2. Exercise question of CH-1 and solve it from NCERT book.
PHYSICAL EDUCATION	<ol style="list-style-type: none"> 1-Olympic Movement 2-One chapter question / answer & discussion

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Holidays Homework for Class-XI

Sub: Biology

- Q.1 Name the kingdoms which include prokaryotic organisms in the three domain classification.
- Q.2 Bring out major difference between Dinoflagellates & Chrysophytes.
- Q.3 What is the difference between ascospores & conidia.
- Q.4 Why are Deuteromycetes called imperfect fungi?
- Q.5 What do the terms phycobiont & mycobiont signify?
- Q.6 Which of these has more number of species : an order or a family?
- Q.7 How are viroids different from viruses?
- Q.8 What are bacteriophages?
- Q.9 Name the person who proposed the system of binomial nomenclature.
- Q.10 Brinjal & potato belong to the genus, Solanum, but two different species. What defines them as separate species?
- Q.11 A plant may have different names in different regions of the country or world . How do botanists solve this problem?
- Q.12 Amoeba multiplies by mitotic cell division .Is this phenomenon growth or reproduction? Explain.
- Q.13 Name two animals which do not reproduce at all.
- Q.14 In the five-kingdom system of Whittaker , how many kingdoms are eukaryotes?
- Q.15 Why were bacteria , cyanobacteria & fungi included in plant kingdom, in the earlier classification systems ?
- Q.16 What is the principle underlying the use of cyanobacteria in agricultural fields for crop improvement ?
- Q.17 Name the substance present in the cell wall of diatoms . What makes them hard & indestructible ?
- Q.18 Certain properties like growth & reproduction cannot be taken as overall defining characters of living organisms. Justify.
- Q.19 What are the 2 characteristics that can be defining properties of life forms?
- Q.20 What is the significance of heterocyst ? Name an eubacteria in which heterocyst is present.
- Q.21 Herbarium, zoological parks & keys are all taxonomic aids; yet how do they differ from each other?
- Q.22 What name is given to the stalk & leaf like photosynthetic organ of Phaeophyceae?
- Q.23 What are the different classes of Kingdom Fungi?
- Q.24 Differentiate between any 3 classes of fungi on the basis of asexual & sexual reproduction or reproductive structures.
- Q.25 What does ICZN & ICBN stand for? Write the scientific names of ginger, neem, peacock & crow.

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STANDARD-XI
SUB- PHYSICS

Chapter: Units and Dimensions

1. How many light years are there in one metre?
2. What is the number of electrons that would weigh 1 Kg? Mass of an electron is $9.11 \times 10^{-31} \text{Kg}$.
3. Express the average distance of the earth from the sun in i) light year ii) parsec
4. Name the physical quantities whose dimensional formulae are as follows.
I) ML^2T^{-3} II) MT^{-2} III) $ML^{-1}T^{-1}$ IV) $ML^{-1}T^{-2}$
5. Define accuracy and precision.
6. If the units of force, energy and velocity are 20N, 200J and 5 ms^{-1} , find the units of length, mass and time.
7. When 1m, 1Kg and 1 min are taken as the fundamental units, the magnitude of the force is 36 units. What will be the value of this force in CGS system?
8. Check whether the following equation is dimensionally correct.
 $\frac{1}{2}mv^2 = mgh$
9. Check the correctness of the relation $\tau = I\alpha$, where τ is the torque on a body, I is the moment of inertia and α is angular acceleration.
10. Check by the method of dimensions whether the following equations are correct.
i) $E = mc^2$ ii) $T = 2\pi \sqrt{l/g}$
iii) $v = \sqrt{P/\rho}$, where v = velocity of sound, P = pressure and ρ = density of medium
iv) $v = \frac{1}{2l} \sqrt{\frac{T}{m}}$, where v = frequency of vibration, l = length of the string, T = tension in the string and m = mass per unit length
11. Find the dimension of a/b in the equation $F = a\sqrt{x} + bt^2$, where F = force, x is distance and t is time.
12. The Vander Wall's equation for a gas is
 $(P + a/V^2)(V - b) = RT$
Determine the dimensions of a and b . Hence write the SI units of a and b .
13. Rule out or accept the following formulae for kinetic energy on the basis of dimensional arguments i) $\frac{3}{16}mv^2$ ii) $\frac{1}{2}mv^2 + ma$
14. Consider a simple pendulum; having a bob attached a string, that oscillates
Under the action of force of gravity, suppose that the periods of oscillation of the simple pendulum depends on i) mass m of the bob ii) length l of the pendulum iii) acceleration due to gravity g at the place. Derive the expression for its time period **using method of dimension**.
15. The velocity ' v ' of water waves depends on wave length ' λ ', density of water ρ and the acceleration due to gravity ' g '. Deduce by the method of the dimension the relation between these quantities.
16. Assuming that the mass M of the largest stone that can be moved by a flowing river depends upon ' v ' velocity, ' ρ ' the density of water and ' g ', the acceleration due to gravity, show that M varies with the sixth power of the velocity of flow.
17. The velocity of sound waves ' v ' through a medium may be assumed to depend on
i) the density of medium ' d '
ii) the modulus of elasticity ' E '

Deduce by the method of dimension, the formula for the velocity of sound. Take dimensional constant $K=1$

18. The frequency 'v' of vibration of a stretched string depends upon

- i) its length 'l'
- ii) its mass per unit length 'm' and
- iii) the tension T in the string

Obtain dimensionally an expression for frequency ν .

19. A planet moves around the sun in nearly circular orbit. Its period of revolution T depends upon

- i) radius r of the orbit
- ii) mass 'M' of the sun
- iii) the gravitational constant G.

Show dimensionally that $T^2 \propto r^3$.

20. A body travels uniformly a distance of (13.8 ± 0.2) m in a time (4.0 ± 0.3) s. Calculate its velocity with error limits. What is the percentage error in velocity?

21. Round off the following numbers as indicated

- i) 18.35 up to 3 digits
- ii) 143.45 up to 4 digits
- iii) 18967 up to 3 digit
- iv) 12.653 up to 3 digits
- v) 248337 up to 3 digits
- vi) 321.135 up to 5 digits
- vii) 101.55×10^6 up to 4 digits
- viii) 31.325×10^{-5} up to 4 digits

22. State the number of significant figures in the following

- i) 2.000m
- ii) 5100Kg
- iii) 0.050cm

23. The mass and radius of the earth are 5.975×10^{24} Kg and 6.37×10^6 m respectively. Calculate the average density of earth to correct significant figures. Take $\pi=3.142$.

24. In successive measurements, the reading of the period of oscillation of a simple pendulum were found to be 2.63s , 2.56s , 2.42s, 2.71s and 2.80s in an experiment.

Calculate i) mean value of the period of oscillation. ii) absolute error in each measurement iii) the mean absolute error iv) relative error v) the percentage error .

25. The length and breadth of a rectangle are (5.7 ± 0.1) cm and (3.4 ± 0.2) cm respectively. Calculate area of the rectangle with error limits.

26. The measured mass and volume of a body are 2.00 g and 5.0n cc respectively. With possible errors of 0.001 g and 0.1 cc, what would be the possible error in density?

27. If the errors involved in the measurement of a side and mass of a cube are 3% and 4% respectively, what is the maximum permissible error in the density of the material?

28. The percentage of error in the measurement of mass and speed are 2% and 3% respectively. How much will be the maximum possible error \pm in the estimate of kinetic energy?

29. The period of oscillation of a simple pendulum is $T=2\pi \sqrt{l/g}$. Measured value of L is 20.0 cm known to 1 mm accuracy and time for 100 oscillations of the pendulum is found to be 90 s using a wrist watch of 1 s resolution. What is the accuracy in the measurement of "g"?

30. A physical quantity Q is given by $Q=A^2B^{3/2}/C^4D^{1/2}$. The percentage of error in A,B,C and D are 1%,2%,4% and 2% respectively. Find the % of error in Q.

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Holidays Homework , Class-XI

Sub: Chemistry

Chapter Name: Some Basic Concepts of Chemistry

Q.1 What is significant figure ?

Q.2 How many significant figures are present in 0.0025?

Q.3 What is Gay Lussac's law of Gaseous volumes?

Q.4 Calculate the no of atoms in each of the following (i) 52u of He (ii) 52g of He?

Q.5 Calculate the number of electrons present in 51g of NH_3 ?

Q.6 How many SO_4^{2-} ions are present in 49g of H_2SO_4 ?

Q.7 Calculate the molar mass of hydrated Copper Sulphate?

Q.8 Which postulate of Dalton's atomic theory is related to law of conservation of mass?

Q.9 What is law of multiple proportion? Explain with an example.

Q.10 Convert 15°C into Fahrenheit scale.

Q.11 What is Law of definite proportions ? Give an example.

Q.12 What is Avogadro's law ?

Q.13 What is the relationship between molecular mass and vapour density.

Q.13 What is the vapour density of oxygen at NTP ?

Q.14 What is the volume of 88g of CO_2 gas at NTP ?

Q.15 What is Avogadro's constant ?