School No. 41363 CBSE Affiliation No. 531390

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Holiday Homework
Summer Vacations
Class – 11th Science

Physics	Learning: Learn about Physical Quantities and their dimensions. Written: Make notes of CH-01 and CH-02 in a separate notebook. **Activity: Solve the given assignment in a rough notebook.** **1- Mark Questions (10)** 1. Define the term 'dimension of a physical quantity'. 2. What is the SI unit of force? 3. Write the dimensional formula for pressure. 4. Give an example of a dimensionless quantity. 5. Define least count. 6. Name two types of errors in measurement. 7. What is a systematic error? 8. Write the dimensional formula of Planck's constant. 9. What is the order of magnitude of 546 cm? 10. How many significant figures are in 0.00560? **2 Mark Questions (5)** 11. Differentiate between precision and accuracy. 12. What are base and derived quantities? Give one example of each. 13. Explain the term parallax and its use in measurement. 14. A physical quantity X is given by . Find the dimensional formula of X. 15. If a rod is measured as 3.12 m and the standard value is 3.00 m, calculate the percentage error. **3 Mark Questions (5)** 16. State and explain the principle of dimensional homogeneity. 17. Check the correctness of the equation using dimensional analysis.

18. Explain different types of errors in measurement with examples.
19. The diameter of a wire is measured as (2.245 ± 0.005) mm. Calculate the percentage error.
20. A student measures the time for 10 oscillations of a pendulum as 17.2 s. Find the time period and its percentage error if the least count of stopwatch is 0.1 s.

5 Mark Questions (5)

21. What are the seven base SI units? Explain each with their symbol and definition.
22. Derive the formula to convert temperature from Celsius to Fahrenheit and vice versa.
23. Discuss different types of errors and how they can be minimized.
24. Derive the relation between different units of energy: erg and joule. Prove 1 J = erg.
25. Explain dimensional analysis and use it to derive the formula for time period of a simple pendulum.

1 Mark Questions (10)

26. Define displacement.
27. What is the SI unit of velocity?
28. What is uniform motion?
29. Write the first equation of motion.
30. What does the area under velocity-time graph represent?
31. What is instantaneous speed?
32. Write a condition when average velocity equals average speed.
33. Can the displacement be zero when distance is not? Explain shortly.
34. Define acceleration.
35. Draw a distance-time graph for a body at rest.

2 Mark Questions (5)

36. A car travels 30 km with a speed of 60 km/h and next 30 km with 30 km/h. Find the average speed.
37. Differentiate between distance and displacement with examples.

	38. Explain retardation with one example. 39. A body starts from rest and moves with an acceleration of 4 m/s^2. Find its velocity after 5 seconds. 40. Define scalar and vector quantity with examples. **3 Mark Questions (5)** 41. Derive the third equation of motion: . 42. A train moves with an initial velocity of 20 m/s and uniform acceleration of 2 m/s^2. Find the distance travelled in 10 seconds. 43. Draw and explain velocity-time graph for uniformly accelerated motion. 44. A stone is dropped from a height of 80 m. Calculate the time it takes to reach the ground. (Take m/s^2) 45. A body travels 10 m in the first second, 20 m in the second, 30 m in the third. Is the motion uniform or accelerated? **5 Mark Questions (5)** 46. Derive all three equations of motion using graphical method. 47. Explain the motion of an object under free fall. Derive expressions for time, velocity and distance. 48. A car moving with a velocity of 36 km/h is brought to rest in 5 seconds by applying brakes. Find the retardation and distance covered. 49. With the help of graphs, explain the difference between uniform and non-uniform motion. 50. A particle moves in a straight line with acceleration m/s^2. If its initial velocity is 2 m/s, find the velocity and displacement after 4 seconds.
Chemistry	1. Writing Work: write a 15 page assignment on any one topic given below; a. Laws of combining volumes. b. Empirical & Molecular Formulae c. Bohr's Model of Atom, d. Discovery of cathode & anode ray particles. 2. Worksheet: Solve 50 Questions MCQ sheet from Chapters 1st & 2nd.

	3. Activity based: Draw a well coloured A3 Size chart paper of following topics: (Best sheet shall be awarded in class) a. Periodic Table (latest version; link to download: https://iupac.org/wp-content/uploads/2022/07/IUPAC_Periodic_Table_A3-04May22_CRA.pdf) b. Electromagnetic Spectrum including visible region of light.
Maths	1. Application Based Worksheet (pdf given) 2. Chapter: Sets, Relations & Functions Practice Questions (pdf given)
Biology	Writing work 1. Create an assignment of 15 pages with appropriately labelled coloured diagrams on A4 liner sheets. Use file cover to bind pages. Topics for assignment: a. Plant and Animals cell, b. Cell: Fundamental unit of life. 2. Create a herbarium file on a scrapbook. Mount about 20 leaves with their scientific names. Learning work 1. Learn biosphere reserve name. 2. Learn Scientific Name of plants, animals, fungi and insects. 3. Learn Heierarichial classification given in chapter-1 (Diversity in living organisms)

English	1. **Reading & Analysis:** a. Read any one recommended novel (To Kill a Mockingbird by Harper Lee or The Alchemist by Paulo Coelho). b. Write a literary analysis (300–400 words): theme, characters, symbolism, and your opinion. 2. **Writing Practice**: Write: a. One article on "The Impact of Social Media on Youth". b. One speech on "Environmental Conservation is the Need of the Hour". c. One job application with bio-data. 3. Comprehension Practice: Solve at least 3 unseen passages (available in CBSE sample papers or online resources). Summarize each passage in your own words. 4. Flamingo/Vistas Revision: Select 2 prose pieces and 1 poem. 5. Make notes on: Theme, Important quotes, Message and literary devices