

HOLIDAY ASSIGNMENT  
SCIENCE

CLASS –IX

**PHYSICS:**

I. GRAPH:

1. Derive graphically as well as mathematically the following:

a)  $s = u + \frac{1}{2} at^2$ , b)  $v = u + at$ , c)  $v^2 = u^2 + 2as$

2. Draw the distance - time graph for uniform motion

3. Draw the velocity – time graph for non – uniform motion.

II. PROBLEMS:

4. During an experiment, a signal from a spaceship reached the ground station in 5min. what was the distance of the spaceship from the ground station ? the signal travels at the speed of light, that is  $3 \times 10^8$  ms<sup>-1</sup>.

5. A racing car has a uniform acceleration of 4 ms<sup>-1</sup>. What distance will it cover in 10s. after start.

6. A train traveling at a speed of 90 km h<sup>-1</sup>. Brakes are applied so as to produce a uniform acceleration of -0.5 ms<sup>-1</sup>. find how far the train will go before it is brought to rest.

7. A trolley, while going down on an inclined plane has an acceleration of 2cm s<sup>-2</sup>. What will be its velocity 3s after the start ?

**CHEMISTRY:**

III. FILL UPS :

1. In \_\_\_\_\_ the constituent particles are far apart.

2. In liquids the constituent particles are \_\_\_\_\_ packed.

3. IN \_\_\_\_\_ the constituent particles are closely packed.

4. In gaseous state the intermolecular forces are very \_\_\_\_\_

5. In a \_\_\_\_\_ the force of attraction is very strong.

6. IN gaseous state the molecules move freely , therefore the \_\_\_\_\_ fast.

7. The foul smell from sewage is due to \_\_\_\_\_ of gases.

8. A liquid has an open surface, but a \_\_\_\_\_ does not have.

9. The \_\_\_\_\_ causes cooling.

10. \_\_\_\_\_ state consists of super energetic and super excited particles.

IV. Define – melting point, boiling point, sublimation, evaporation, volatile substance

**BIOLOGY : PROJECT & SEMINAR**

V. Collect more information on ELECTRON MICROSCOPE – components from net.

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