

# NEW STANDARD ACADEMY

DPP -01

NEET - JEE

CLASS : 9<sup>TH</sup>

## PHYSICS

1. Define the term velocity. What is its unit?. Is it a scalar or vector quantity?.
2. What is the Si unit of acceleration?.
3. Name the two types of physical quantities.
4. Define vector quantity.
5. Give the simplest type of motion.

## CHEMISTRY

1. We can get the smell of perfume sitting several metres away, why?
2. We can easily move our hand in the air but to do the same through a solid block of wood. We need a karate expert. Why?
3. What is dry ice?
4. What is normal atmospheric pressure?
5. Give the temperature at which water exists in two different phases/states.

## BIOLOGY

1. Why does mitochondria have largely folded inner membrane?.
2. Which organelle makes the digestive enzyme of lysosome?.
3. Name the cell organelle due to which leaves, flowers and fruits get their colour.
4. Name the cell organelle which helps in the formation of lysosome.
5. List two similarities between mitochondria and plastids.

## MATHS

1. Express the following in the form of p/q.  
(i)  $\sqrt{3}$  (ii)  $\sqrt[3]{37}$
2. Write two irrational numbers between 0.2 and 0.21.
3. Write three irrational numbers between  $\sqrt{3}$  and  $\sqrt{5}$ .
4. Given a rational approximation of  $\sqrt{3}$  correct to two places of decimals.
5. Simplify :  $2.\sqrt[3]{40} + 3.\sqrt[3]{625} + 4.\sqrt[3]{320}$
6. Simplify :  $(3\sqrt{5} - 2\sqrt{3})(3\sqrt{5} + 2\sqrt{3})$
7. Simplify :  $\sqrt{m^2n^2} \times \sqrt[6]{m^2n^2} \times \sqrt[3]{m^2n^2}$

8. If  $x = 7 + 4\sqrt{3}$ , find the value of  $\sqrt{x} + \frac{1}{\sqrt{x}}$ .

9. Evaluate :  $\sqrt{5+2\sqrt{6}}$ .

10. Express in  $\frac{p}{q}$  form

(i)  $2.\overline{124}$ ,

(ii)  $0.\overline{237}$