NEW STANDARD ACADEMY

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CLASS 9 (Academy) 21-04-2025

PHYSICS

1. An object has moved through a distance .Can it have zero displacement? If yes support your answer with an example.
2. A Farmer moves along the boundary of a square field of side 10 m in 40 s. What will be the magnitude of displacement of he former at the end of 2 minutes 20 seconds?
3. Which of the following is true for displacement? (a) It cannot be zero (b) Its magnitude is greater than the distance travelled by the object.
4. Distinguish between speed and velocity.
5. Under what condition (s) is the magnitude of average velocity of an object equal to average speed?

CHEMISTRY

1. What do you mean by change of physical state? Explain with examples.
2. Explain the terms:
   (a) Boiling point   (b) Freezing point
3. Explain the following terms with examples:
   (a) Evaporation   (b) Condensation   (c) Sublimation
4. What do you mean by latent heat? Explain with examples.
5. Does the temperature of water at 100°C and steam is same ?

BIOLOGY

1. What is the endocytosis
2. What is the exocytosis
3. What is facilitated diffusion
4. What is the function of semi permeable membrane
5. What is the middle lamella

MATH

1. Show that the polynomial $x^2 + 2x + 5$ has no zeroes.
2. What number should be added to $2x^3 - 3x^2 - 8x$ so that the resultant polynomial leaves remainder 10 when divided by $(2x+1)$.
3. If $(x-a)$ is a factor of $3x^2 - mx - nx$, then prove that $a = \frac{m+n}{3}$.
4. Factorise the cubic $x^3 - 2x^2 - x + 2$.
5. If $a + b = 10$ and $a^2 + b^2 = 58$ find the value of $a^3 + b^3$.