

## AKGECAT ADMIN PANEL

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### Result

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Subject	Total questions	Answered correctly	Percentage
Physics	4	1	25.0
Chemistry	3	1	33.33333333333333
Maths	3	1	33.33333333333333
Total	10	3	30.0

Q.

If the kinetic energy of a free electron doubles, its de Broglie wavelength changes by the factor

2

1/2

$\sqrt{2}$

$1/\sqrt{2}$

Correct choice - 1

Q.

Which of the following spectral series of hydrogen atom is lying in visible range of electromagnetic wave?

Lyman series

Balmer series

Paschen series

P-Fund series

Correct choice - 1

Q.

The dimensional formula of Planck's constant is

[MLT]

$[ML^2T^{-1}]$

$[M^2L^2T^{-1}]$

$[ML^1T^{-1}]$

Correct choice - 1

Q.

If the kinetic energy of a free electron doubles, its de Broglie wavelength changes by the factor

2

1/2

$\sqrt{2}$

$1/\sqrt{2}$

Correct choice - 2

Q.

Which one of the following statements is not true regarding (+) Lactose?

(+) Lactose,  $C_{12}H_{22}O_{11}$  contains 8-OH groups

On hydrolysis (+) Lactose gives equal amount of D(+) glucose and D(+) galactose

(+) Lactose is a  $\beta$ -glycoside formed by the union of a molecule of D(+) glucose and a molecule of D(+) galactose

.

(+) Lactose is reducing sugar and does not exhibit mutarotation

Correct choice - 1

Q.

Which one of the following statements is true'?

Drying of oil involves hydrolysis

Saponification of oil yields a diol.

Refining of oil involves hydrogenation

Addition of antioxidant to oil minimizes rancidity.

Correct choice - 1

Q.

IUPAC name of  $(CH_3)_3CCl$

2 chloro 2 methyl propane

t-butyl chloride

n-butyl chloride

3-chloro butane

Correct choice - 1

Q.

The equation of normal to the curve  $y = x^2 + 4x + 1$  at the point where  $x=3$  is

$$10x - y = 8$$

$$10x + y + 8 = 0$$

b.

$$x + 10y = 223$$

None of these

Correct choice - 1

Q.

If  $A = \begin{bmatrix} 1 & 0 & 2 \\ -1 & 2 & 0 \\ 0 & 0 & 1 \end{bmatrix}$  and  $B = \begin{bmatrix} 0 & 0 & 2 \\ 1 & 0 & -1 \\ 0 & 2 & 1 \end{bmatrix}$ , the value of  $AB - I_3$ , is

$$\begin{bmatrix} 0 & 4 & 4 \\ 2 & 0 & -4 \\ 0 & 2 & 1 \end{bmatrix}$$

$$\begin{bmatrix} -1 & 4 & 4 \\ 2 & -1 & -4 \\ 0 & 2 & 0 \end{bmatrix}$$

$$\begin{bmatrix} 0 & 0 & 4 \\ 0 & 1 & -1 \\ 0 & 2 & 1 \end{bmatrix}$$

None of these

Correct choice - 1

Q.

If  $y = x^3 + 2\sin x + \sin^{-1} x + xe^x$ , value of  $\frac{dy}{dx}$  at  $x=0$  is

2

4

3

None of these

Correct choice - 1