Day-5 [2-07-18]
Solutions

Class 6th

Mathematics :

Let 3A = 5B=6C = x. Then

A : B : C = $\left(\frac{x}{3}\times 30\right):\left(\frac{x}{5}\times 30\right):\left(\frac{x}{6}\times 30\right)$**=10 : 6 : 5**

Physics: Ans :A

Chemistry: Ans :B

Biology: Ans : (A)

Class 7th

Mathematics :

$$x^2+\frac{1}{x^2}=7$$

Adding 2 on both sides, we get

Physics:

X=80000+1450+7850=89,300 mm

Chemistry: 1(iv), 2(iii), 3(v), 4(ii), 5(i).

Biology: Ans : (A)

Class 8th

Mathematics :

Given : A + B = 90º, $B=90^\circ-A$

$\cos^2 A+\cos^2(90^\circ-A)=1$

Physics:

Given the pendulum makes 20 oscillations in 49 seconds

$\Rightarrow$ 1 oscillation in $\frac{49}{20}$ seconds = 2.45s

i.e. Time taken for one oscillation = 2.45s $\Rightarrow$ Time period, T = 2.45s

g = 980cm/s² l = ?

We know, $T=2\pi\sqrt{\frac{l}{g}}$ $\Rightarrow T^2=\frac{4\pi^2 l}{g}$ $\Rightarrow T^2g=4\pi^2 l$ $\Rightarrow l=\frac{T^2g}{4\pi^2}=\frac{(2.45)^2\times 980}{4\times(3.14)^2}$ On simplfying we get l = 149.1cm

Chemistry: c,d

Biology: Ans : (C)

Class 9th

Math :

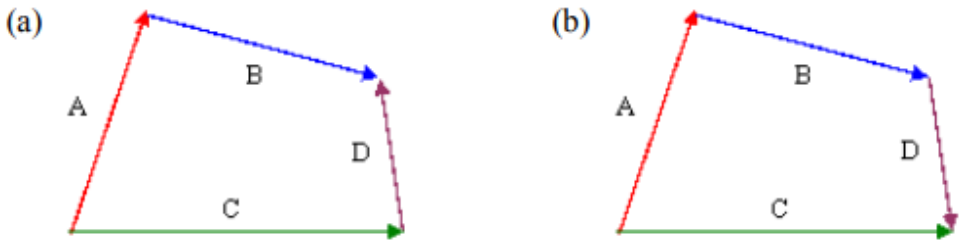
$\cos 20^\circ + \cos 40^\circ + \cos 60^\circ + \ldots + \cos 140^\circ + \cos 160^\circ + \cos 180^\circ$

If $A + B = 180^\circ$

$\cos A + \cos B = 0$ and $\cos 180^\circ = -1$

Ans : -1

Physics:



Chemistry: Ans : (B)

Biology: Ans : (B)

Class 10th

Math :

$\alpha + \beta = 60^\circ$ and $\alpha - \beta = 45^\circ$

Find β value we get

Ans : 1

Physics:

$l_2 - l_1 = l_1 \alpha (t_2 - t_1) = 500 \times 11 \times 10^{-6} (50 - 20) = 0.165$ m.

Chemistry: B

Biology: Ans : (C)

Reasoning Key / Solutions :

Ans : (B)