$$
6^{\text {th }} \text { Class }
$$

$>$ Mathematics: Ans: (D)
$77=15 \times 5+2$
$123=15 \times 8+3$
$\mathrm{x}=2, \mathrm{y}=3$.
Physics: Ans: (D)
> Chemistry: Ans: (A)
Biology: Ans: (A)
$7^{\text {th }}$ Class
> Mathematics: Ans : (A) (i) and (ii)
> Physics: Ans: (C)
$>$ Chemistry: Ans: (C)
Biology: Ans: (C)
$8^{\text {th }}$ class
> Mathematics: Ans: (A)

$$
\begin{aligned}
& \text { Given } \frac{2^{n+1}}{(2 n)^{n-1}} \div \frac{4^{n+1}}{\left(2^{n-1}\right)^{n+1}} \\
& \Rightarrow \frac{2^{n+1}}{2^{n^{2}-n}} \div \frac{(2 n)^{n+1}}{(2)^{(n-1)(n+1)}} \\
& \Rightarrow 2^{n+1-n^{2}+n} \div 2^{(2 n+2)-\left(n^{2}-1\right)} \\
& \Rightarrow 2^{2 n+1-n^{2}} \div 2^{2 n+3-n^{2}} \\
& \Rightarrow \frac{2^{2 n+1-n^{2}}}{2^{2 n+3-n^{2}}}=2^{\left(2 n+1-n^{2}\right)-\left(2 n+3-n^{2}\right)}=2^{-2}=\frac{1}{2^{2}}=\frac{1}{4} \quad\left(\because \frac{a^{m}}{a^{n}}=a^{m-n}\right)
\end{aligned}
$$

Physics: Ans: (A)
$>$ Chemistry: Ans: (D)
Zeolite when treated with hard water exchange $\mathbf{C u}^{+2}$ and $\mathbf{M g}^{+2}$ ions (present in hard water) with $\mathbf{N a}^{+}$ions
Biology: Ans: (A)
$9^{\text {th }}$ Class
> Mathematics: Ans : (B)
The complement of $x=90^{\circ}-x$
Given that $x=42^{\circ}+\frac{1}{2}\left(90^{\circ}-x\right)$
$2 x=84^{\circ}+90^{\circ}-x$
$3 x=174^{\circ} \Rightarrow x=58^{\circ}$
Adjacent angles, linear pair of angles and properties of angles
Physics: Ans : (A)
$>$ Chemistry: Ans: (C)
$>$ Biology: Ans: (B)
$10^{\text {th }}$ class
> Mathematics: Ans: (B)
A pair of intersecting lines has a unique solution.
If $a_{1} x+b_{1} y+c_{1}=0$ and $a_{2} x+b_{2}-y+c_{2}=0$ represent a pair of intersecting lines, then $\frac{a_{1}}{a_{2}} \neq \frac{b_{1}}{b_{2}}$
$\therefore \frac{-3}{4} \neq \frac{p}{4} \Rightarrow p \neq-3$
Physics: Ans: (C)
$>$ Chemistry: Ans: (C)
Nitrogen is almost a chemically unreactive gas. It is used to flush bags of chips to prevent them from getting oxidized
$>$ Biology: Ans: (B)
> Reasoning : Ans: (C)
On the basis of fourth letter, insist will come first on the basis of fifth letter.

