Solution of the day/ August 20, 2019

6th Class

- **Mathematics:** Ans : (C)

Use of the order of removal of brackets and simplify.

$$7-\left[13-\left\{-2-6\left(6of-5\right)\right\}\right]=7-\left[13-\left\{-2-6\times-30\right\}\right]=172$$

- **Physics:** Ans: (C)
- **Chemistry:** Ans: (A)
- **Biology:** Ans: (A)

7th Class

- **Mathematics :** Ans : (B)

Let numerator = x – 6

Denominator = x

Also $\frac{x-6+3}{x}=\frac{2}{3}$

$\frac{x-3}{x}=\frac{2}{3}\Rightarrow 3x-9=2x$

$x=9$

$\therefore$ Fraction $=\frac{9-6}{9}=\frac{3}{9}=\frac{1}{3}$

- **Physics:** Ans: (D)
- **Chemistry:** Ans: (A)
- **Biology:** Ans: (D)

8th class

- **Mathematics:** Ans: (D)

Male teachers : female teachers = 2 : 5

Total number of teachers in the school : female teachers = (2 + 5) : 5

$\therefore \frac{\text{Total number of teachers in the school}}{25}=\frac{7}{5}$

So the number of teachers in the school $=7\times\frac{25}{5}=35$

- **Physics:** Ans : (A)
- **Chemistry:** Ans: (D)

MnO_2, PbO_2 and BaO will not give H_2O_2 with HCl. MnO_2 and PbO_2 will give Cl_2 and BaO will react with HCl to give $BaCl_2$ and water.

- **Biology:** Ans: (C)

9th Class

- **Mathematics :** Ans : (C)

$\angle ACB = 70°$ [$\because \angle ABC$, $\angle BAC$ and $\angle ACB$ are angles in a triangle]

$\because \angle OCD = 110°$ [$\because \angle ACB$ and $\angle OCD$ are linear pair]

$\because \angle COD = 30°$ [$\because \angle OCD$, $\angle ADE$ and $\angle COD$ are angles in a triangle]

$\because \angle COE = 150°$ [$\because \angle COD$ and $\angle COE$ are linear pair]

- **Physics:** Ans : (C)

- **Chemistry:** Ans: (B)

- **Biology:** Ans: (C)

10th class

- **Mathematics:** Ans : (C)

$\frac{1}{x} + \frac{1}{y} = 7$ _____(1)

$\frac{3}{y} + \frac{4}{x} = 25$ _____(2)

Let $\frac{1}{x} = u$ and $\frac{1}{y} = v$

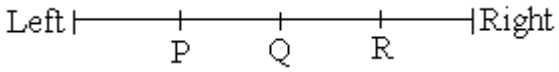
Then, equations (1) and (2) become:
u + v = 7 ———— (3)
4u + 3v = 25 ———— (4)
Multiplying equation (3) by 3 and then subtracting from equation (4):
4u + 3v = 25
3u + 3v = 21
– – –
————————
u = 4
Substituting the value of u in equation (3):
$4 + v = 7 \Rightarrow v = 7 - 4 \Rightarrow v = 3$
$\therefore x = \frac{1}{u} = \frac{1}{4}$ and $y = \frac{1}{v} = \frac{1}{3}$

Thus, $xy = \frac{1}{4} \times \frac{1}{3} = \frac{1}{12}$

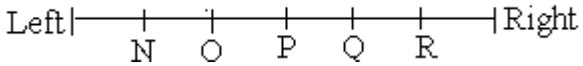
- **Physics:** Ans: (B)
- **Chemistry:** Ans: (C)
- **Biology:** Ans: (B)
- **Reasoning :** Ans: (B)

At first, we arrange the given informations.

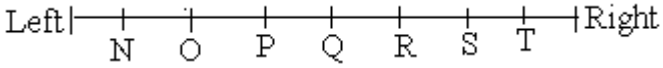
(i) Q is to the left of R but right of P.



(ii) O is right to N and left to P.



(iii) S is right to R and left to T



Hence, Q is in the middle.