

Solution of the day/Sep-18, 2018

6th Class

- **Mathematics:** Ans: $-x^2 + 2xy - 6y^2$
- **Physics:** Ans: (C)
- **Chemistry:** Ans: Rusted, chemical, substance
- **Biology:** Ans: (B)

7th Class

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

8th class

- **Mathematics:**
Sol: $\sec 5A = \operatorname{cosec} (A - 36^\circ) \Rightarrow \operatorname{cosec} (90^\circ - 5A) = \operatorname{cosec} (A - 36^\circ)$ [$\sec \theta = \operatorname{cosec} (90^\circ - \theta)$]
 $\Rightarrow 90^\circ - 5A = A - 36^\circ \Rightarrow 6A = 126^\circ \Rightarrow A = 21^\circ$ Hence, $A = 21^\circ$.
- **Physics:** Ans: (C)
- **Chemistry:** Ans: (B)
- **Biology:** Ans: (B)

9th Class

- **Mathematics:**
Sol: (D) $\sin \theta_1 + \sin \theta_2 + \sin \theta_3 = 3 \Rightarrow \sin \theta_1 = \sin \theta_2 = \sin \theta_3 = 1 \Rightarrow \theta_1 = \theta_2 = \theta_3 = 90^\circ \therefore \cos \theta_1 + \cos \theta_2 + \cos \theta_3 = 0$
- **Physics:** Ans: (B)
- **Chemistry:** Ans: (B, C, D)
- **Biology:** Ans: (B)

10th class

➤ **Mathematics:**

Sol: $\tan 60^\circ \operatorname{cosec}^2 45^\circ + \sec^2 60^\circ \tan 45^\circ$

On substituting the values of various t-ratios I (1), we get

$$\text{Given expression} = \sqrt{3} \times (\sqrt{2})^2 + (2)^2 \times 1 = 2\sqrt{3} + 4 = 4 + 2\sqrt{3}$$

➤ **Physics:** Ans: a-q,s; b-p,r; c-p,r; d-p,r.

➤ **Chemistry:** Ans: (B)

➤ **Biology:** Ans: (A)

➤ **Reasoning :**

Sol: (A) Add $1^2, 2^2, 3^2, 4^2, 5^2$ to the previous term.

$$\therefore 31 + 25 = 56$$