

Solution of the day/Oct-12, 2018

6th Class

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

7th Class

- **Mathematics:** Ans: (B)
- **Physics:** Ans: a-r, b-p, c-q
- **Chemistry:** Ans: Alloy
- **Biology:** Ans: (D)

8th class

- **Mathematics:** Ans: (A)

- **Physics:**

$$\text{Sol: } \frac{1}{u} + \frac{1}{v} = \frac{2}{30} \Rightarrow \frac{1}{v} = \frac{2}{30} - \frac{1}{-18} \Rightarrow \frac{1}{v} = \frac{6+5}{90} = \frac{11}{90} \Rightarrow v = \left(\frac{90}{11}\right) \text{cm}$$

(OR)

$$f = 15 \text{cm } u = -18 \text{cm, } R = +30 \text{cm}$$

$$\frac{1}{15} = \frac{1}{v} - \frac{1}{18} \Rightarrow \frac{1}{v} = \frac{1}{15} + \frac{1}{18} \Rightarrow \frac{1}{v} = \frac{33}{15 \times 18} \Rightarrow v = \frac{90}{11} \text{cm}$$

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

9th Class

- **Mathematics:** Ans: (B)
- **Physics:** Ans: Plane mirror and convex mirror

➤ **Chemistry:** Ans: Carbon is not used for making aluminium from aluminium oxide because aluminium has greater affinity for oxygen than for carbon. Hence, carbon cannot reduce aluminium oxide to aluminium.

➤ **Biology:** Ans: (A)

10th class

➤ **Mathematics:** Ans: (A)

➤ **Physics:** Ans: a-1,2; b-3; c-4; d-5

$$\text{Ans: } \frac{\sin 40^\circ}{\sin r} = {}_a\mu_o = 1.45 \text{ or } \sin r = \frac{\sin 40^\circ}{1.45}$$

$$\frac{\sin r}{\sin r'} = {}_o\mu_w = \frac{\mu_w}{\mu_o} = \frac{1.33}{1.45} \quad \text{OR} \quad \sin r' = \sin r \times \frac{1.45}{1.33} = \frac{\sin 40^\circ}{1.45} \times \frac{1.45}{1.33} = \frac{0.643}{1.33} = 0.4835$$

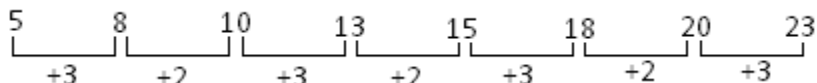
$$\text{OR } r' = \sin^{-1}(0.4835) = 28.9 = 29^\circ$$

➤ **Chemistry:** Ans: (D)

➤ **Biology:** Ans: (C)

➤ **Reasoning :**

Sol.



Therefore, number 12 is wrong and should be replaced by 13. **Ans.** 12