

## Solution of the day/Nov-2, 2018

### 6<sup>th</sup> Class

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

### 7<sup>th</sup> Class

- **Mathematics:** Ans: (B)
- **Physics:** Ans: 9
- **Chemistry:** Ans: True
- **Biology:** Ans: (A)

### 8<sup>th</sup> class

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

### 9<sup>th</sup> Class

- **Mathematics:** Ans: (D)
- **Physics:** Ans: (i) Concave, (ii) Concave, (iii) Convex, (iv) Convex
- **Chemistry:** Ans: (C)
- **Biology:** Ans: (C)

## 10<sup>th</sup> class

➤ **Mathematics:** Ans: (A)

➤ **Physics:** Sol:  $\frac{1}{f} = \frac{1}{u} + \frac{1}{v}$  differentiating w.r.t. t, we have,  $0 = -\frac{1}{u^2} \frac{du}{dt} - \frac{1}{v^2} \frac{dv}{dt}$

$$\therefore \frac{dv}{dt} = \frac{v^2}{u^2} \frac{du}{dt} \quad \text{Here } \frac{du}{dt} = 15\text{ms}^{-1}; \frac{v}{u} = \frac{1}{31}$$

$$\therefore \text{speed of image, } \frac{dv}{du} = -\left(\frac{1}{31}\right)^2 \times 15 = 0.016\text{m towards mirror.}$$

➤ **Chemistry:** Ans: (B)

➤ **Biology:** Ans: (A)

➤ **Reasoning :**

Ans: (C) 

Odd number		4		Even number
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1 2 

3	4	2
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3	4	1
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 3 4 4 2 4 1 2 3 1 2 3 4 1 3 2 4 1 2 3 4 1 2 4 1

Thus, there are two such 4s.