

**Q.5** For the cell



the cell potential  $E_1 = 0.3095 \text{ V}$

For the cell

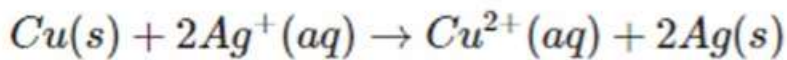


the cell potential = \_\_\_\_\_  $\times 10^{-2} \text{ V}$ . (Round off the nearest integer).

[Use :  $\frac{2.303RT}{F} = 0.059$ ]

**27th July Evening Shift 2021**

**Ans 5.** Cell reaction is :



$$\text{Now, } E_{\text{cell}} = E_{\text{cell}}^{\circ} - \frac{0.059}{2} \log \frac{[\text{Cu}^{2+}]}{[\text{Ag}^+]^2} \dots (1)$$

$$\therefore E_1 = 0.3095 = E_{\text{cell}}^{\circ} - \frac{0.059}{2} \cdot \log \frac{0.01}{(0.001)^2} \dots (2)$$

From (1) and (2),  $E_2 = 0.28 \text{ V} = 28 \times 10^{-2} \text{ V}$