

Solution of the day29/ Aug 31, 2018

6th Class

➤ **Mathematics:**

Ans: (C)

➤ **Physics:** Ans: (C)

➤ **Chemistry:** Ans: Physical

➤ **Biology:** Ans: (B) In clove, edible part is bud, in cinnamon edible part is bark, in fenugreek edible parts are seeds and leaves and in cardamom edible part is seed.

7th Class

➤ **Mathematics:**

Sol: L.C.M of 3,6,9 is 18

$$\therefore \sqrt[3]{2} = \sqrt[3 \times 6]{2^6} = \sqrt[18]{64}$$

$$\sqrt[6]{3} = \sqrt[6 \times 3]{3^3} = \sqrt[18]{27}$$

$$\sqrt[9]{4} = \sqrt[9 \times 2]{4^2} = \sqrt[18]{16}$$

$$\therefore \sqrt[3]{2} > \sqrt[6]{3} > \sqrt[9]{4}$$

➤ **Physics:** Ans: 1

➤ **Chemistry:** Ans: (C)

➤ **Biology:** Ans: (B)

8th class

Mathematics:

➤ Sol: Substitute the corresponding values

➤ **Physics:**

Sol: $1 \text{ M.S.D} = S = \frac{1\text{cm}}{20} = 0.05\text{cm}$

Number of divisions on vernier scale, N=20.

$$\text{Least count} = \frac{S}{N} = \frac{0.05}{20} = 0.0025\text{cm}$$

➤ **Chemistry:** Ans: (D)

➤ **Biology:** Ans: (D)

9th Class

➤ Mathematics:

$$\text{Sol: } \theta \in III ; \cot \theta = \sqrt{7} \Rightarrow \operatorname{cosec} \theta = -\sqrt{8}; \sec \theta = -\frac{\sqrt{8}}{\sqrt{7}} \therefore G.E = \frac{8-8/7}{8+8/7} = \frac{3}{4}$$

➤ Physics: Ans: (A)

➤ Chemistry: Ans: (C)

➤ Biology: Ans: (B)

10th class

➤ Mathematics:

$$\text{Sol: We have, } \sin B = \frac{1}{2}$$

By Pythagoras theorem,

$$\text{Now, } 3 \cos B - 4 \cos^3 B = 3 \left(\frac{\sqrt{3}}{2} \right) - 4 \left(\frac{\sqrt{3}}{2} \right)^3 = \frac{3\sqrt{3}}{2} - \frac{12\sqrt{3}}{8}$$

$$= \frac{3\sqrt{3}}{2} - \frac{3\sqrt{3}}{2} = 0$$

➤ Physics:

$$\text{Sol: Mass of iron, } m = 150 \text{ g} = \frac{150}{1000} = 0.15 \text{ kg}$$

$$\text{Specific heat of iron, } C = 480 \text{ J kg}^{-1} \text{C}^{-1}$$

$$\text{Change in temperature } \Delta T = (25 - 20)^\circ \text{C} = 5^\circ \text{C}$$

$$\text{We know that } Q = m \times C \times \Delta T$$

$$= 0.15 \text{ kg} \times 480 \text{ J kg}^{-1} \text{C}^{-1} \times 5^\circ \text{C}$$

$$= 360 \text{ J}$$

➤ Chemistry:

Sol: (i) Double displacement and precipitation reactions.

(ii) Combination and oxidation reactions

➤ Biology: Ans: (C) Fatty acid and glycerol are absorbed in the lymph vessels namely lacteals and then poured into the blood stream.

➤ Reasoning : Ans: (A)