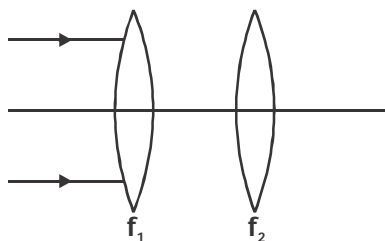


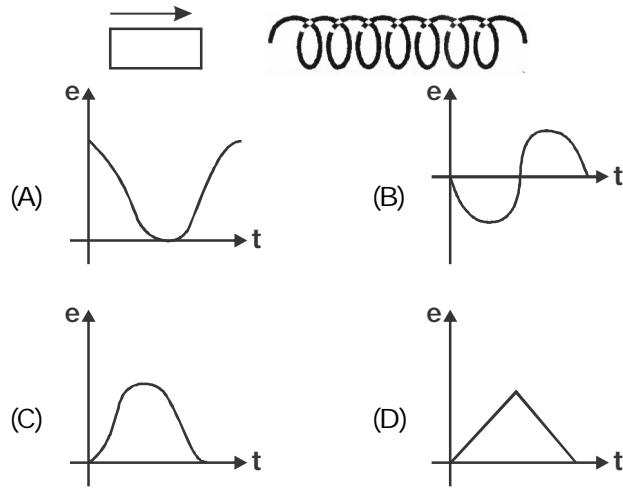
- 1 → **Which of the following organs develops first ?**
(A) Liver (B) Heart
(C) Kidney (D) Notochord
- 2 → **During embryonic period, animals repeat embryonic stages of their ancestors. This law is called**
(A) Flokin's law
(B) Biogenetic law
(C) Anaximander's law
(D) Hardy-Weinberg's law
- 3 → **Which of the following T-cells are destroyed by HIV ?**
(A) Cytotoxic T-cells (B) Killer T-cells
(C) Suppressor T-cells (D) Helper T-cells
- 4 → **How many major classes of immunoglobulins are found?**
(A) Four (B) Five
(C) Three (D) Seven
- 5 → **What is the correct sequence of the following events ?**
1. **Formation of the chromosome theory of inheritance**
 2. **Experiments which proved that DNA is the genetic material**
 3. **Mendel's law of inheritance**
- (A) 1, 3 and 2 (B) 1, 2 and 3
(C) 3, 1 and 2 (D) 2, 1 and 3

- 6 Parallel beam of light is incident on the system of two convex lenses of focal length $f_1 = 20$ cm and $f_2 = 10$ cm as shown below.

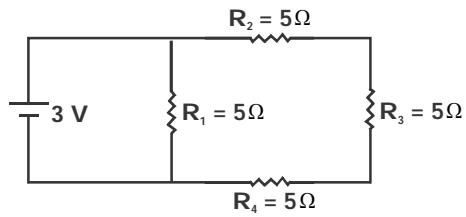


What should be the distance between the two lenses so that rays after refraction from both the lenses pass undeviated ?

- (A) 60 cm (B) 30 cm
(C) 90 cm (D) 40 cm
- 7 Suppose we have a large number of identical particles, very small in size. Any of them at 10 cm separation repel with a force of 3×10^{-10} N. If you measure the repulsion and find it to be 6×10^{-6} N; how many particles were there in the group ?
- (A) 2×10^4 (B) 4×10^6
(C) 6×10^8 (D) 8×10^{10}
- 8 How much U^{235} is consumed in a day in an atomic power house operating at 400 MW, provided the whole of the mass of U^{235} is converted into energy?
- (A) 0.115 g (B) 0.384 g
(C) 0.597 g (D) 0.908 g
- 9 The variation of induced emf (e) with time (t) in a coil if a short bar magnet is moved along its axis with a constant velocity is best represented as :

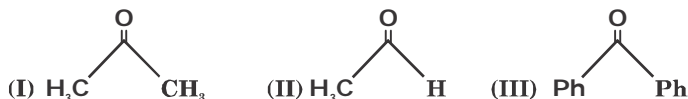


The value of current i in the circuit shown below is



- (A) 1.8 A (B) 0.8 A
(C) 0.2 A (D) 1.6 A

11 The order of reactivity of phenyl magnesium bromide with the following compounds is



- (A) (II) > (III) > (I)
 (B) (I) > (III) > (II)
 (C) (II) > (I) > (III)
 (D) All react with the same rate

12 Doping of silicon with P or Al increases the conductivity. The difference in the two cases is

- (A) P is non-metal whereas Al is a metal
 (B) P is a poor conductor while Al is a conductor
 (C) P gives rise to extra electrons while Al gives rise to holes
 (D) P gives rise to holes while Al gives rise to extra electrons.

13 The vapour pressure of a pure liquid A is 40 mm Hg at 310 K. The vapour pressure of this liquid in a solution with liquid B is 32 mm Hg. Calculate the molefraction of A in the solution if it obeys the Raoult's law.

- (A) 0.3 (B) 0.5
 (C) 0.8 (D) 0.11

14 What may be expected to happen when phosphine gas is mixed with chlorine gas?

- (A) the mixture only cools down
 (B) PCl_3 and HCl are formed and the mixture warms up
 (C) PCl_5 and HCl are formed and the mixture cools down.
 (D) $\text{PH}_3 \cdot \text{Cl}_2$ is formed with warming up.

- 15 **What is the standard cell potential for the cell $\text{Zn} ; \text{Zn}^{2+} (1\text{M}) || \text{Cu}^{2+} (1\text{M}) ; \text{Cu}$?**
(E° for $\text{Zn}^{2+} / \text{Zn} = - 0.76$; E° for $\text{Cu}^{2+} / \text{Cu} = + 0.34$)
- (A) $- 0.76 + (- 0.34) = - 0.42 \text{ V}$
(B) $- 0.34 + 0.76 = + 0.42 \text{ V}$
(C) $0.34 - (- 0.76) = + 1.10 \text{ V}$
(D) $- 0.76 - (+ 0.34) = - 1.10 \text{ V}$

Class : XII**General Awareness**

- 16 **Who has been presented with the "Honoured Guest" award by the U.S. state of Texas for his contribution to cinema and art in 2015 ?**
- (A) Shahrukh Khan (B) Anupam Kher
(C) Amitabh Bachan (D) Aamir Khan
- 17 **Aviation giant Boeing is a company of which country ?**
- (A) Australia (B) Russia
(C) America (D) Japan
- 18 **Which corporate company has a slogan "Powered by intellect. Driven by values" ?**
- (A) TCS (B) Wipro
(C) Infosys (D) HCL
- 19 **Who has won Mixed Doubles in the US Open Tennis Championship in 2015 ?**
- (A) Roberta Vinci and Simona Halep
(B) Nicolas Mahut and Sam Querrey
(C) Leander Paes and Martina Hingis
(D) Roberta Vinci and Nicolas Mahut
- 20 **Name the youngest singer entry in Forbes most powerful women list 2015.**
- (A) Taylor Swift (B) Rihanna
(C) Lady Gaga (D) Katy Perry