

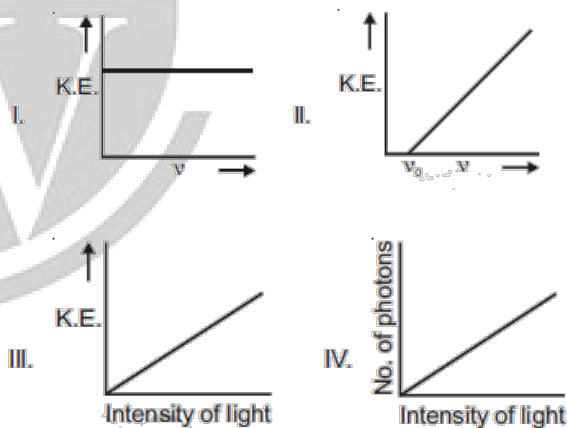
ARJUNA (NEET)

STRUCTURE OF ATOM

DPP-5

- An isotone of ${}^{76}_{32}\text{Ge}$ is
 (A) ${}^{77}_{32}\text{Ge}$ (B) ${}^{77}_{33}\text{As}$
 (C) ${}^{77}_{34}\text{Se}$ (D) ${}^{80}_{34}\text{Se}$
- The ratio of specific charge of an electron to that of a proton is
 (A) 1:1 (B) 1837:1
 (C) 1:1837 (D) 2:1
- Atomic number and mass number of an element M are 25 and 52 respectively. The number of electrons, protons and neutrons in M^{2+} ion are respectively
 (A) 25, 25 and 27 (B) 25, 27 and 25
 (C) 27, 25 and 27 (D) 23, 25 and 27
- The frequency of a wave is $6 \times 10^{15} \text{ s}^{-1}$. Its wave number would be
 (A) 10^5 cm^{-1} (B) $2 \times 10^7 \text{ m}^{-1}$
 (C) $2 \times 10^7 \text{ cm}^{-1}$ (D) $2 \times 10^5 \text{ m}^{-1}$
- The number of photons of light of wavelength 7000 \AA equivalent to 1 J are
 (A) 3.52×10^{-18} (B) 3.52×10^{18}
 (C) 50,000 (D) 10,000
- The threshold energy is given as E_0 and radiation of energy E falls on metal, then K.E. is given as
 (A) $\frac{E - E_0}{2}$ (B) $E - E_0$
 (C) $E_0 - E$ (D) $\frac{E}{E_0}$

- If threshold wavelength (λ_0) for ejection of electron from metal is 330 nm, then work function for the photoelectric emission is
 (A) $6 \times 10^{-10} \text{ J}$ (B) $1.2 \times 10^{-18} \text{ J}$
 (C) $3 \times 10^{-19} \text{ J}$ (D) $6 \times 10^{-19} \text{ J}$
- A certain metal when irradiated with light ($\nu = 3.2 \times 10^{16} \text{ Hz}$) emits photo electrons with twice kinetic energy as did photo electrons when the same metal is irradiated by light ($\nu = 2.0 \times 10^{16} \text{ Hz}$). Calculate ν_0 of electron ?
 (A) $1.2 \times 10^{14} \text{ Hz}$ (B) $8 \times 10^{15} \text{ Hz}$
 (C) $1.2 \times 10^{16} \text{ Hz}$ (D) $4 \times 10^{12} \text{ Hz}$
- Which is the correct graphical representation based on photoelectric effect?



- (A) I & II (B) II & III
 (C) III & IV (D) II & IV
- Which one of the following is not isoelectronic with O^{2-}
 (A) Mg^+ (B) Na^+
 (C) N^{3-} (D) F^-

ANSWERS KEY

- | | |
|--------|---------|
| 1. (B) | 6. (B) |
| 2. (B) | 7. (D) |
| 3. (D) | 8. (B) |
| 4. (B) | 9. (D) |
| 5. (B) | 10. (A) |



Note - If you have any query/issue

Mail us at support@physicswallah.org

