ARJUNA (NEET)

STRUCTURE OF ATOM

DPP-9

1. Orientation of orbitals is given by
   (A) Magnetic quantum number
   (B) Spin quantum number
   (C) Azimuthal quantum number
   (D) Principal quantum number

2. For n = 4, which one of the following values of l is not possible?
   (A) 1 (B) 2
   (C) 3 (D) 4

3. If uncertainty in position and momentum are equal, then uncertainty in velocity is
   (A) $\sqrt{\frac{h}{\pi}}$ (B) $\frac{1}{2m}\sqrt{\frac{h}{\pi}}$
   (C) $\sqrt{\frac{h}{2\pi}}$ (D) $\frac{1}{m}\sqrt{\frac{h}{\pi}}$

4. The de-Broglie wavelength associated with a matter particle is
   (A) Directly proportional to the momentum of the particle
   (B) Directly proportional to the velocity of the particle
   (C) Inversely proportional to the momentum of the particle
   (D) Inversely proportional to Planck's constant

5. The wavelength associated with an electron moving with velocity 10^{10} ms^{-1}.
   (A) 6.62×10^{-10} m (B) 7.27×10^{-14} m
   (C) 3.69×10^{-12} m (D) 4.92×10^{-11} m

6. Probability density is given by
   (A) ψ
   (B) $[\psi]^2$
   (C) de Broglie wavelength
   (D) $\hat{H}$

7. The possible values of magnetic quantum number for *p*-orbital are
   (A) 0
   (B) -1, 0, +1
   (C) -2, -1,0, +1, +2
   (D) -3, -2, -1,0, +1, +2, +3

8. The notation of orbital with n = 5 and l = 3 is
   (A) 2*p* (B) 5*s*
   (C) 5*f* (D) 3*d*

9. In multi-electron atom 4s-orbital is lower in energy than
   (A) 3*d*-orbital (B) 3*p*-orbital
   (C) 2*s*-orbital (D) 2*p*-orbital

10. Shape of an orbital is given by
    (A) Principal quantum number
    (B) Spin quantum number
    (C) Azimuthal quantum number
    (D) Magnetic quantum number

ANSWERS KEY

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

Note - If you have any query/issue

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