

## ATOMIC STRUCTURE AND PERIODIC CLASSIFICATION

Std. XII  
CHEMISTRYTime: 30 mts  
Max.Marks: 25

- Which of the following experiment explains the particle nature of light
  - Interference
  - Diffraction
  - Photo electric effect
  - Davission - Germer experiment
- An equation which relates the particle nature with the wave nature of matter is
  - Einstein equation
  - De-Broglie equation
  - Plank's equation
  - Bohr's equation
- The Mathematical form of uncertainty principle is
  - $\Delta V \cdot \Delta P \geq \frac{h}{2\pi}$
  - $\Delta V \cdot \Delta P \geq \frac{h}{4\pi}$
  - $\Delta x \cdot \Delta P \geq \frac{h}{4\pi}$
  - $\Delta x \cdot \Delta m \geq \frac{h}{2\pi}$
- The Bohr's quantum condition for stationary states is
  - $2d \sin \theta = h\lambda$
  - $E_n = \frac{-1312}{n^2}$
  - $\lambda = \frac{h}{p}$
  - $2\pi a = n\lambda$
- The number of orientation for d-subshell is
  - 5
  - 3
  - 0
  - 1
- The energy of an electron in an atom is given by  $E_n =$ 
  - $\frac{-2\pi^2 me^4}{n^2 h^2}$
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- Condition for the stability of a molecule is
  - $N_b > N_a$
  - $N_a > N_b$
  - $N_a = N_b$
  - a or b
- A bond which is formed only between similar atoms
  - Ionic bond
  - Covalent bond
  - Co-ordinate bond
  - Metallic bond
- The shape of the  $dsp^2$  hybridized molecule
  - square planar
  - octahedral
  - tetrahedral
  - linear
- The hybridisation involved in water molecule is
  - $sp^2$
  - $sp^3$
  - $sp^3d$
  - $sp$

