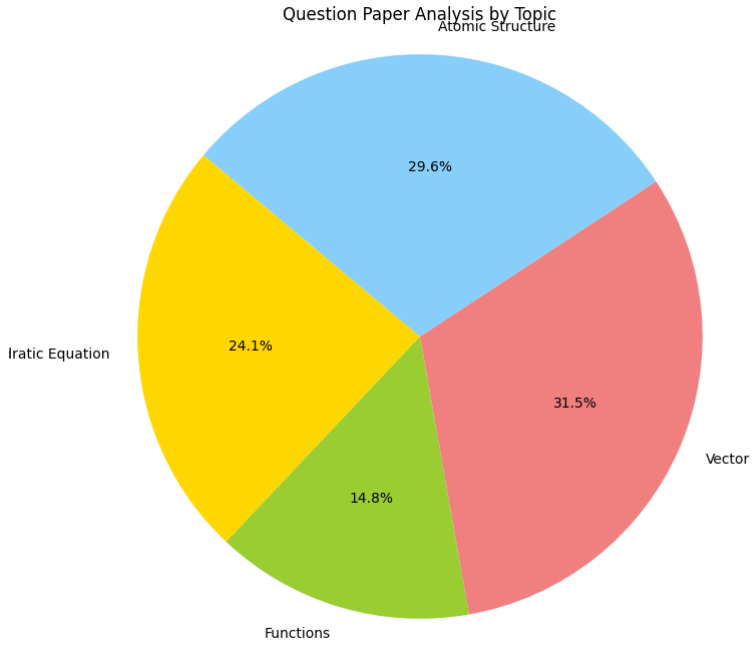
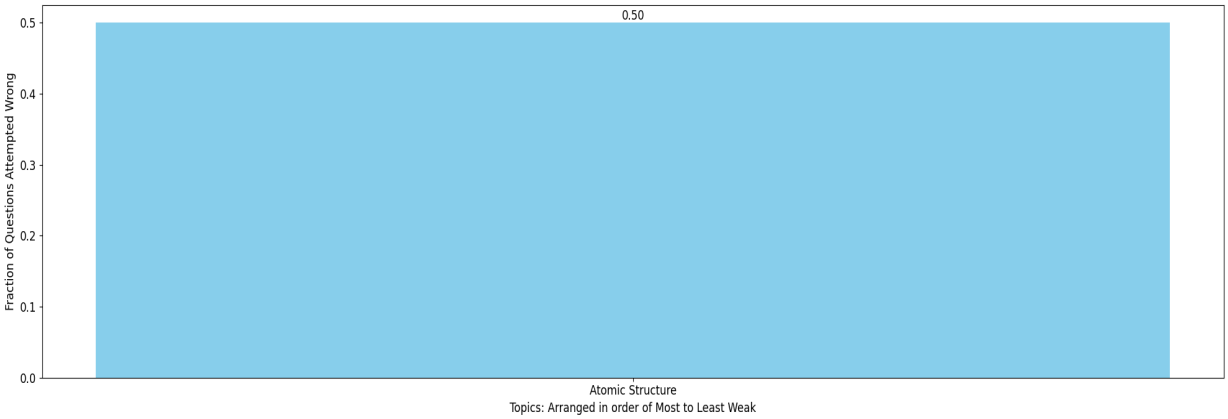
Kartikay_Shankar_Agrawal Total
MLAssist - Personalised DPP

Question Paper Analysis:



Weak Topic Analysis:



Practice Questions:

Atomic Structure:

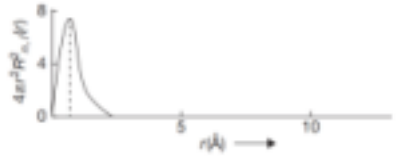
8. Which of the following sets of quantum number is correct for an electron in 4f orbital ?

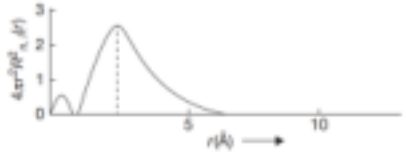
[AIEEE-2004]

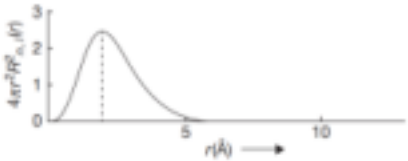
(1) $n = 3, l = 2, m = -2, s = +\frac{1}{2}$ (2) $n = 4, l = 4, m = -4, s = -\frac{1}{2}$

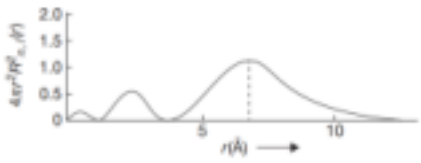
(3) $n = 4, l = 3, m = +1, s = +\frac{1}{2}$ (4) $n = 4, l = 3, m = +4, s = +\frac{1}{2}$

50. The plots of radial distribution functions for various orbitals of hydrogen atom against 'r' are given below: **[JEE Main (April) 2021]**

(A) 

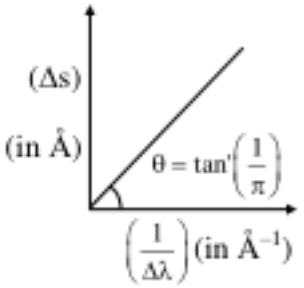
(B) 

(C) 

(D) 

Ans. A

51. A graph is plotted between uncertainty in position and inverse of uncertainty in wavelength for an electron. We get a straight line passing through origin. Calculate voltage through which electron is accelerated with -



(A) 150 V (B) 75 V (C) 37.5 V (D) 300 V

56. What is uncertainty in location of a photon of wavelength 5000Å if wavelength is known to an accuracy of 1 pm?

(A) 7.96×10^{-14} m (B) 0.02 m

(C) 3.9×10^{-8} m (D) none

18. Statement-1 : Emitted radiations will fall in visible range when an electron jump from higher level to n = 2 in Li^{+2} ion.

Statement-2 : First for lines of Balmer series of H-atom belong to visible range.

(A) Statement-1 is true, statement-2 is true and statement-2 is correct explanation for statement-1.

(B) Statement-1 is true, statement-2 is true and statement-2 is NOT the correct explanation for statement-1.

(C) Statement-1 is true, statement-2 is false.

(D) Statement-1 is false, statement-2 is true.

Match the column :