CHEMBUDDY CHAPTER 2

2.1 BOHR'S ATOMIC MODEL

CHOOSE THE CORRECT ANSWER

NO	QUESTION	ANSWER
1	Energy is inversely proportional to	A. wavelength B. frequency C. wave number D. Planck's constant
2	Calculate the energy required to excite an electron from n =2 to n=4.	A. 4.09×10^{-19} J C. 2.05×10^{6} J B. 5.45×10^{-19} J D. 2.74×10^{6} J
3	Choose the highest energy involved when an electron makes a transition.	A. n=4 to n=3 B. n=2 to n=1 C. n=4 to n=2 D. n=3 to n=1
4	What is the frequency, in s^{-1}, of a radiation with energy of 3.37×10^{-19} J per photon?	A. 5.08×10^{-54} s^{-1} C. 5.08×10^{-15} s^{-1} B. 5.08×10^{14} s^{-1} D. 5.08×10^{15} s^{-1}
5	Calculate the wavelength in nm of the second line in Lyman series.	A. 1.026×10^{-16} nm B. 1.026×10^{2} nm C. 9.75×10^{6} nm D. 975×10^{-3} nm
6	What is the minimum amount of ionization energy of hydrogen atom at ground state?	A. 1312.36 kJ mol^{-1} B. 2.18×10^{-18} J C. 2.18×10^{-18} J mol^{-1} D. 1312.36 J mol^{-1}
7	Calculate the wavelength of the third line in the Balmer series.	A. 810 nm C. 434 nm B. 343 nm D. 520 nm

2.1 BOHR'S ATOMIC MODEL

8	In the hydrogen atom, an electron transit from a higher to a lower energy level emits a photon with a wavelength of 1282 nm in Paschen series. Determine the energy level of the excited state for this transition.	A. n = 3 C. n =6 B. n = 4 D. n = 5
9	. A line with wavelength of 434 nm was observed in the Balmer series of the emission spectrum of hydrogen. Calculate its frequency.	A. 5.91×10^{14} s^{-1} C. 6.19×10^{14} s^{-1} B. 7.19×10^{14} s^{-1} D. 6.91×10^{14} s^{-1}
10	Calculate the energy of the photon emitted to produced second line in the Paschen series.	A. 2.55×10^{-19} J C. 1.51×10^{-19} J B. 1.45×10^{-19} J D. 1.55×10^{-19} J