ECAT Chemistry Chapter 5 Atomic Structure

Sr	Questions	Answers Choice
1	Spectrum of white light is continuous becuase	A. Colors separated by dark spaces B. There are no boundary lines between the colours C. The radiations are in infrared region D. The radiatins fall in ultraviolet region
2	If the value of principal quantum number is 3. the total possible values for magnetic quantum number will be	A. 1 B. 4 C. 9 D. 12
3	The wave number of the light emitted by a certain source is 2 x $10^{6}m^{-1}$. The wavelength of this light will be	A. 500 nm B. 500 m C. 200 nm D. 5 x 10⁷m
4	The order of frequency of the following radiations unltraviolet, visible, infrared and microwave is	A. Microwave > infrared > visible > ultraviolet B. Visible > ultraviolet > microwave > infrared C. Ultraviolet > visible > infrared > microwave D. Infrared > microwave > ultraviolet > visible
5	The velocity of photon is:	A. Independent of its wavelength. B. Depends on its wavelength. C. Equal to square of its amplitude D. Depends on its source.
6	Pauli's principle is applicable to	A. Degenerate orbits B. Two electrons in the same orbital C. One electron D. None
7	In which of the following pairs, the numbers of electrons in the outermost shell are different?	A. As,Sb B. Ge,Sn C. In,pt D. Se,Te
8	The order of distance between the various Bohr orbits is	A. r₂-r₁> r₃-r₂> r₄-r₃> ..... B. r₁> r₂> r₂-r₃> r₄-r₃> ..... C. r₂-r₁= r₃- r₂= r₄- r₃> ..... D. r₂-r₁> r₃-r₂< r₄-r₃< ....
9	A 4f orbital has	A. one node B. two node C. three node D. four nodes
		A. <span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">1.6 x 10⁻¹ C Kg⁻¹<o:p></o:p>

10	The charge over mass ratio of electron is:	B. <span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">9.1 x 10⁻³¹ C Kg⁻¹<o:p></o:p> C. <span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">1.7588 x 10¹¹ C Kg⁻¹<o:p></o:p> D. <span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">6.62 x 10⁻³⁴ C Kg⁻¹<o:p></o:p>
11	Which of the following element's outermost orbits last electron has magnetic quantum number m=0?	A. Na B. O C. Cl D. N
12	The quantum number which describes the shape of the orbital is	A. Principle quantum number B. Spin quantum number C. Azimathal quantum number D. Magnetic quantum number
13	The maximum number of electrons in a subshell for which l = 3 is	A. 14 B. 10 C. 8 D. 4
14	n + l value for 4f will	A. 2 B. 5 C. 7 D. 9
15	The degenerate orbitals p-sub shell are	A. 2 B. 3 C. 5 D. 7
16	For which of the following sets of quantum numbers and electron will have the highest energy?	A. 3,2,1,1/2 B. 4,2,-1,1/2 C. 4,1,0,-1/2 D. 5,0,0,1/2
17	The wave length of electron as wave is 0.5 nm. What is the wave length in meter	A. 5 x 10⁻⁹ B. 5 x 10⁻¹² C. 5 x 10⁻⁶ D. 5 x 10⁻¹⁰
18	The energy of the first electron is helium will be	A. -13.6 eV B. -54.4 eV C. -5.44 eV D. zero
19	When the electron jumps form third, fourth, fifth orbits to the second orbit, the transitions are known as	A. Paschen B. Pfund C. Balmer D. Brackett
20	Which is not true with respect to cathode rays?	A. A stream of electrons B. Charged particles C. Move with speed as that of light D. Can be deflected by magnetic fields