ECAT Chemistry Chapter 5 Atomic Structure Online Test

Sr	Questions	Answers Choice
1	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
2	Which of the atoms has $1s^2$, $2s^2$, $2p_x^2 2p_y^1 2p_z^1$ configuration	A. Nitrogen B. Carbon C. Fluorine D. Oxygen
3	The atomic number of an element is 35 what is the total number of electrons present in all the p-orbitals of the ground state atom of that element?	A. 6 B. 11 C. 17 D. 23
4	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
5	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
6	The charge of an electron is determined by	A. J.J. Thomson B. Crooks C. Perrin D. R.A.Millikan
7	With the reference of w/m ratio of anode rays, the e/m ratio of cathode rays s:	A. Greater. B. same. C. Smaller. D. Not fixed.
8	Azimuthal quantum number of last electron of $_{11}Na$ is	A. 1 B. 2 C. 3 D. 0
9	The valence orbital configuration of an element with atomic number 23 is	A. 3d⁵ B. 3d³, 4s² C. 3d³, 4s¹, 4p¹ D. 3d²,4s²,4p¹
10	The orbital in Rutherford's model is	A. Spiral B. Circular C. Both D. None
11	The limiting line of Blamer series in hydrogen spectrum lies in	A. Visible regions B. Ultraviolet region C. Infrared region D. x-rays region
12	Which have better penetrating power	A. Alpha rays B. Beta rays C. Gamma rays D. X-rays
13	Four d-orbitals contain four lobes while fifth contains only two lobes the orbital is	A. dxy B. dxz C. dz² D. dx²- y²
14	No cathode rays are produced in the discharged tube when gas is under ordinary pressure even if voltage of 5000 to 10000 is applies. This reason is	A. Voltage is low B. Discharge tube is not coloured C. Gas does not conduct current under ordinary pressure D. Temperature low

15	The radius of first orbit of hydrogen atom	A. 0.329 A° B. 0.429 A° C. 0.529 A° D. 0.229 A°
16	When an electric current is passed through discharge tube at low pressure, cathode rays are emitted from cathode these rays consist of:	A. Alpha rays. B. Negative particles. C. Electromagnetic rays. D. Positive particles.
17	Photons of yellow colour are _____ energetic than violet colour	A. More B. Less C. Equal D. None
18	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.
19	In the ground state of an atom, the electron is present	A. In the nucleus B. In the second shell C. Nearest to the nucleus D. Farthest from the nucleus
20	For a 3P subshell the set of principle and azimuthal quantum number is	A. n = 1 , l = 2 B. n = 3, l = 0 C. n = 3, l = 1 D. n = 1, l = 3
21	n + l value for 4f will	A. 2 B. 5 C. 7 D. 9
22	Splitting of spectral lines of the hydrogen atom under the influence or magnetic field is called	A. Stark effect B. Zeeman effect C. Compton effect D. Photoelectric effect
23	Question Image	A. Neutrons are attracted by nucleus B. Neutrons carry out nuclear reactions C. Neutrons carry no charge D. Neutrons are electromagnetic radiations
24	In Millikan method the oil droplet falls under the force of gravity but it moves upward due to	A. Electric field B. Magnetic field C. Incident light D. X-rays
25	The radius of second Bohr's orbit is	A. 0.053 nm B. 0.053/4 nm C. 0.053 x 4 nm D. 0.053 x 20 nm
26	The value of Plank's constant 'h' is	A. 6.625 x 10⁻³⁴ B. 6.625 x 10⁻³⁴J sec C. 6.625 x 10⁻³⁴KJ D. 6.625 x 10⁻³⁴K Cal
27	Charge of an electron is:	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 10⁻¹⁹ C<o:p></o:p> B. 9.1 x <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;">10⁻³⁴ C<o:p></o:p> C. 1.7588 x <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;">10¹¹ C<o:p></o:p> D. 6.62 x <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;">10⁻³⁴ C<o:p></o:p></p>
28	Rutherford's experiment led to the discovery of	A. Nucleus B. Electron C. Proton D. alpha particle
29	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
30	Question Image	A. Plank's equations B. de Broglie's equations C. Heisenburg's equation D. None
31	The number of de-electrons retained in Fe^{2+} (At.No. of Fe = 26) ions is	A. 3 B. 4 C. 5 D. 6
32	In Bohr model of hydrogen atom the distance between adjacent orbits increases away from the nucleus, the energy difference between the orbits	A. Increases B. Decreases C. Reaming same D. Orbits coincide
33	Effective magnetic moment of Sc^{3+}ion is	A. 1.73 B. 0 C. 5.92 D. 2.83
34	When 3p orbital is complete, the entering electron goes into	A. 4s B. 3d C. 4p D. 4f
35	The nature of positive rays depend on:	A. Nature of discharge tube. B. Nature of resident gas. C. Nature of electrode. D. All of above.
36	The credit of discovering neutron goes to	A. Rutherford B. Langmuir C. Chadwick D. Austen
37	Charge to mass ratio of electron was discovered by:	A. Millika. B. Rutherford. C. J.J. Thomson. D. Chadwick.
38	E = hv is the	A. Spectral equation B. Plank's equation C. de Broglie's equation D. None of these
39	Which of the following has more unpaired d-electrons?	A. Zn⁺ B. Fe²⁺ C. Ni³⁺ D. Cu⁺
40	In the ground state of an atom, the electron is present:	A. In the nucleus. B. In the second shell. C. Nearest to the nucleus. D. farthest from the nucleus.
41	Energy of electron in first orbit of H atom is	A. -45.32 KJ/mole B. -82.08 KJ/mole C. -52.53 KJ/mole D. -1313.31 KJ/mole
42	The spectrum of helium is expected to be similar to that of	A. H B. Li⁺ C. Na D. He⁺
43	The nature of positive ray depend on:	A. The nature of electrode. B. The nature of discharge tube. C. The nature of residual gas. D. All of above.
44	Alpha rays consist of:	A. Neutrons. B. Helium nucleus. C. Protons. D. Hydrogen nucleus.

45	The correct set of quantum numbers (n,l and m) respectively of the unpaired electron of chlorine atom is	A. 2,1,0 B. 2,1,1 C. 3,1,1 D. 3,2,1
46	The e.m value for positive rays maximum for:	A. Oxygen. B. Nitrogen. C. Helium. D. Hydrogen.
47	When the 6d orbital is completed the entering electron goes into	A. 7f B. 7 s C. 7 p D. 7 d
48	When electrons revolve in stationary orbits	A. There is no change in energy level B. They vecome stationary C. They are gaining kinetic energy D. There is increase in energy
49	Subsidiary quantum number specifies	A. size of orbital B. shape of orbital C. orientations of orbitals D. Nuclear stability
50	In Millikan method for determination of charge on electron the air in the chamber is ionized by	A. Protons B. Electric field C. X-rays D. a - particles
51	The third line of the Balmer series, in the emission spectrum of the hydrogen atom,is due to the transition from the	A. Fourth Bohr orbit to the first Bohr orbit B. Fifth Bohr orbit to the second Bohr orbit C. Sixth Bohr orbit to the third Bohr orbit D. Seventh Bohr orbit to the third Bohr orbit
52	Neutron was discovered by:	A. Chadwick. B. Bohr. C. Rutherford. D. Plank.
53	The ratio of the ionization energy of H and $Be^{3+}$is	A. 1 : 1 B. 1 : 3 C. 1 : 9 D. 1 : 16
54	An orbital can accommodate maximum two electrons with opposite spins according to	A. Heisenberg's principle B. Aufbau principle C. Hund's srule D. Pauli exclusion principle
55	Light emitted from a source has its wave length 500nm, then its wave number will be	A. 2 x 10⁶m⁻¹ B. 2 x 10⁷m⁻¹ C. 5 x 10⁸m⁻¹ D. 5 x 10⁹m⁻¹
56	The orbitals having n + l = 5 are	A. 2p, 3d,3s B. 3p, 3d, 5s C. 3s, 4p, 4d D. 5s, 4p, 3d
57	A 4f orbital has	A. one node B. two node C. three node D. four nodes
58	Maximum potential energy that an electron can have within the atom is:	A. Equal to zero. B. Less than zero. C. Greater than zero. D. Infinite
59	Rutherford's atomic model suggests the existence of	A. Atom B. Nucleus C. alpha particle D. Measons
60	The value of R (Rydberg's constant) is _____ m-1	A. 1.0974 x 107 B. 1.0842 x 107 C. 1.082 x 10-7 D. Both a and b
61	Consider the ground state of Cr atom (Z=24). The numbers of electrons with the azimuthal quantum numbers l = 1 and l = 2 are respectively	A. 12 and 4 B. 16 and 5 C. 16 and 4 D. 12 and 5
62	If the value of azimuthal quantum number is 3, then values of m the magnetic quantum no. will be	A. 0, 1, 2, 3 B. +3, +2, +1, -1, -2, -3 C. 0, -1, -2, -3

	quantum no. will be	D. -3, 0, +3
63	1 erg of energy corresponds to	A. 6.02 x 10²³J/mol B. 6.02 x 10¹⁶J/mol C. 1 erg/mol D. 10⁻⁷J/mol
64	The maximum number of electrons in a subshell for which l = 3 is	A. 14 B. 10 C. 8 D. 4
65	Orbitals having same energy are called	A. Hybrid orbitals B. Valence orbitals C. Degenerate orbitals D. D-orbitals
66	The arrangement of subshells in the ascending order of their energy on complete filing of 4f subshell the entering electrons goes to	A. 5s B. 5p C. 5d D. 5f
67	The size of electronic shell is described by	A. Azimuthal Q. no B. Magnetic Q.No C. Spin Q. No D. Principle Q. No
68	The divisibility of atom was shown by	A. Stoney B. J.J. Thomson C. Millikan D. Rutherford
69	Proton was discovered by:	A. Chadwick B. J.J. Rhomson C. Millikan. D. Goldstein.
70	The total number of orbitals possible for the quantum number n is	A. n B. n² C. 2n D. 2n²
71	Splitting of spectral lines when atoms are subjected to strong electron field is called	A. Zeeman effect B. Stark effect C. Photoelectric effect D. Compton effect
72	The quantum number which determines the shape of the orbital is	A. principal B. azimuthal C. magnetic D. spin
73	In the ground state, an element has 13 electrons in its M shell. The element is	A. Copper B. Chromium C. Nickel D. Iron
74	For principle quantum number n=4, the total number of orbitals having l = 3 is	A. 3 B. 7 C. 5 D. 9
75	Electrons arranged in orbitals according to the increasing order of their n + l values, this rule is named as	A. Hund's rule B. Heisenberg's principle C. Paulit exclusion principle D. Auf bau principle
76	Heaviest particle is	A. Meson B. Neutron C. Proton D. Electron
77	The energy of ionization of an atom is the energy difference between orbital	
78	Schrodinger wave equation describes electron completely because	A. It describes a set of four quantum number B. It describes the particle nature of electron C. It measures wavelength of electron D. It describes electron moving in specific orbit
79	The radius of first orbit of H-atom is	A. 4.75 A° B. 3.84 A° C. 8.4 A° D. 0.529 A°
80	When the electron jumps form second third, fourth orbit to the fist orbit, the transitions are known as	A. Balmer series B. Lyman series C. Pfund series D. Brackett series

81	Which of the following orbitals have a dumb bell shape?	A. s B. p C. d D. f
82	Cathode rays emitted from cathode are	A. Canal rays B. Protons C. Electrons D. Positrons
83	With increasing principle quantum number, the energy difference between adjacent energy levels in H atom	A. Decreases B. Increases C. Remains constant D. Decreases for low value of Z and increase for higher value of Z
84	Anode is the surface on which probability of finding electron is:	A. 50% B. Less than 10%. C. More than 95%. D. Zero.
85	Which of the following is not isoelectronic?	A. Na⁺ B. Mg²⁺ C. O²⁻ D. Cl⁻
86	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
87	When 6s orbital is complete then next electron goes to	A. 6p B. 6d C. 5d D. 4f
88	Electrons in degenerate orbitals are placed in separate orbitals with same spin according to	A. Hund's rule B. Pauli exclusion principle C. Aufbau principle D. Mosley's law
89	The charge over mass ratio of electron is:	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> 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>
90	An electron with n = 3 , l = 2 will be in the sub-shell	A. 3p B. 3d C. 3f D. 3s
91	Balmer's series is in _____ region	A. Visible B. U V C. I. R. D. None
92	The uncertainty principle was stated only	A. De Brogilie B. Heinsenberg C. Einstein D. Schrodinger

93	e/m of cathode rays is same but for positive rays e/m changes by changing gas in the discharge tube because	A. Cathode rays are small sized particles B. Cathode rays have same charge C. Nature of cathode rays same for all gasses, but masses of nuclei are different for different gases D. Temperature of cathode rays higher
94	The configuration $1s^2 2s^2 2p^5 3s^1$ shows	A. Excited state of O₂ B. Excited state of neon C. Excited state of fluorine D. Ground state of fluorine atom
95	Rutherford's planetary like picture of the atomic modal was defective because	A. It did not describe the quantity of positive charge B. It did not explain the repulsion of protons within the nucleus C. No empty space between nucleus and the electrons D. Moving electron should radiate energy
96	The total number of possible values of magnetic quantum number for the value of l=3 is	A. 3 B. 1 C. 5 D. 7
97	An electron has principal quantum number 3. The number of its 1 subshell and 2 orbitals would be respectively	A. 3 and 5 B. 3 and 7 C. 3 and 9 D. 2 and 5
98	The four quantum numbers of the valency electron of potassium are	A. 4,1,1,1/2 B. 4,0,0,1/2 C. 4,1,0,1/2 D. 4,4,0,1/2
99	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
100	The wave number of the line emitted is $109.678 \times 10^5 m^{-1}$ in the Lyman series when electron transition occurs	
101	Energy of electron in an orbit according to Bohr theory is negative due to	A. Repulsion of electrons in the same orb B. At infinity energy is zero ad a traction towards nucleus decreases energy C. Electron has negative charge D. Product of positive nuclear charge and negative charge is negative
102	The rules which describe the distribution of electron in atomic energy levels are Auf-ban principle, Pauli's exclusion principle. Hunds rule. The pauli exclusion principle refers to the	A. Orientation of orbital in space B. Fact that two electrons in the same orbital should have opposite spins C. Energy of the orbital D. Spin of the electron
103	The total number of orbitals in a shell with principal quantum number 'n' is	A. 2n B. 2n² C. n² D. n + 1
104	The symbol of the element whose atoms have the outer most electronic configuration $2s^2 2p^3$ is	A. N B. Li C. P D. Na
105	The degenerate orbitals p-sub shell are	A. 2 B. 3 C. 5 D. 7
106	In the atomic emission spectrum the lines which appear bright, appear dark in absorption spectrum because	A. The radiations emitted in emission spectrum are absorbed in absorption spectrum B. Atomic emission spectrum is continuous C. Atomic absorption spectrum is continuous D. Distance between the lines increases
107	When potassium metal is exposed to violet light	A. Ejection of electrons takes place B. Ejection of some potassium atoms occurs C. There is no effect D. The absorption of electrons takes place
108	Charge to mass ratio (e/m) of the electron is determined by	A. R. A. Millikan B. J. J. Thompson C. G. J, Stoney D. None of these
109	The energy of the first electron is helium will be	A. -13.6 eV B. -54.4 eV C. -5.44 eV

		D. zero
110	Positive particle in discharged tube is produced by ionization of gas molecules, which is caused by	A. Gas molecules collide with anode B. Gas molecules are at high temperature C. Gas molecules produce X-rays D. Cathode rays remove electrons from gas molecules
111	Orbital having same energy is called:	A. Hybrid orbital. B. Valence orbital. C. Degenerate orbital. D. D-orbital.
112	Charge on electron was discovered by:	A. Millikan. B. Crook. C. Neil Bohr. D. Rutherford.
113	Smallest charge of electricity that has been measured so far is	A. Charge on a-rays B. Charge on electron (1.602 x 10⁻¹⁹C) C. Charge on x-rays D. Charge on gamma rays
114	Number of neutrons in heavy hydrogen atom is	A. 0 B. 1 C. 2 D. 3
115	Energy of electron in the infinite Bohr orbit of H-atom is	A. 0 KJ/mole B. 1 KJ/mole C. -1 KJ/mole D. -1313.32 KJ/mole
116	The value of charge on electron is	A. 1.602 x 10⁻¹⁹coulombs B. 1.602 x 10⁻¹⁸coulombs C. 1.602 x 10⁻¹⁷coulombs D. 1.602 x 10⁻¹⁶coulombs
117	The de-Brogile wavelength of a particle with mass 1g and velocity 100 m/s is	A. 6.63 x 10⁻³³m B. 6.63 x 10⁻³⁴m C. 6.63 x 10⁻³⁵m D. 6.65 x 10⁻³⁵m
118	When electron jumps from n_2= 2,3,4,5,.... orbit to n_1= 1 orbit in the hydrogen atom, the radiations emitted give the spectral lines	A. Lyman series B. Blamer series C. Paschen series D. Brackett series
119	Quantum number value for 2p orbitals are:	A. n=2 ,l=1 B. n=1 ,l=2 C. n= ,l=0 D. n=2 ,l=0
120	Rutherford's model of atom failed because:	A. The atom did o have a nucleus and electrons B. It did not account fro the attraction b/w protons and neutrons C. It did no account for the stability of the atom. D. There is actually no space b/w the nucleus ad the electrons.
121	If the radius of first Bohr orbit be a_o, then the radius of third Bohr orbit would be	A. 3 x a_o B. 6 x a_o C. 9 x a_o D. 1/2 x a_o
122	Pauli's principle is applicable to	A. Degenerate orbits B. Two electrons in the same orbital C. One electron D. None
123	The number of electrons in the M shell of the element with atomic number 24 is	A. 24 B. 12 C. 13 D. 8
124	Question Image	A. s B. p C. d D. f
125	Their e/m, ratio resembles with that of electrons	A. Alpha rays B. Beta rays C. Gamma rays D. X-rays
126	The principle quantum number describes	A. The distance form the nucleus B. The shape of the orbital

126	The principle quantum number describes	C. The orientation of the orbital D. The spin of the electron
127	Which quantum number is sufficient to describe the electron is hydrogen atom?	A. l B. n C. m D. s
128	Sodium chloride imparts a yellow colour to the Bunsen flame. This can be interpreted due to the	A. low ionization energy of sodium B. sublimation of metallic sodium to give yellow vapour C. emission of excess energy absorbed as a radiation in the visible region as a radiation in the visible region D. photosenitivity
129	The electron in an atom	A. moves randomly around the nucleus B. has fixed space around the nucleus C. is stationary in various energy levels D. moves around its nucleus in definite energy levels
130	The quantum number which describe the orientation of the orbitals is	A. Spin quantum number B. Principle quantum number C. Azimathal quantum number D. Magnetic quantum number
131	When cathode rays strike the anode metal X-rays are emitted and not the positive rays because	A. Cathode rays are material particles B. Cathode rays knock out electrons from anode, which emit X-rays when outer electron take their place C. Cathode rays are absorbed by the nucleus D. Cathode rays become heated
132	What is the packet of energy called?	A. Electron B. Photon C. Positron D. Proton
133	Which of the following is not charged particle	A. Proton B. Electron C. Neutron D. Hydrogen nucleus
134	The nature of the positive rays depend on	A. The nature of the electrode B. The nature of the discharge tube C. The nature of the residual gas D. All of the above
135	Which one of the following particles has amass 1/1836 time, that of hydrogen?	A. Neutron. B. Proton. C. Electron. D. Positron.
136	Which of the following element's outermost orbits last electron has magnetic quantum number m=0?	A. Na B. O C. Cl D. N
137	The experimental evidences for the existence of atomic nucleus comes from:	A. Line spectrum of hydrogen. B. Magnetic bonding of cathode rays. C. Millikan oil drop experiment. D. Scattering of alpha particles by thin metal foil.
138	Which one of the following statements is true about discovery of neutrons?	A. These particles were formed by the bombardment of Alpha-particles on Beryllium. B. These particles are formed by the spiting of alpha-particles. C. These particles were discovered by natural radioactivity. D. None of above.
139	The number of spherical nodes in 3p orbitals are	A. One B. Three C. Non D. Two
140	Neutrons was discovered by	A. Mosely B. Milliken C. Chadwick D. Ruherford
		A. <p class="MsoNormal"><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 kg<o:p>

141	Mass of simple electron is:	</o:p> 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 10⁻³⁰ kg<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;">1.66 x 10⁻³¹ kg<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;"><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;">9.1 x 10⁻³¹ kg<o:p></o:p>
142	In the ground state of an atom the electron is present	A. In the nucleus B. In the second shell C. Nearest to the nucleus D. Farthest from the nucleus
143	Splitting of spectral lines when atoms are subjected to strong electric field is called:	A. Zeeman effect. B. Stark effect C. Photoelectric effect. D. Compton effect.
144	Which of the following is not a sub-atomic particle	A. Electron B. Proton C. Neutron D. Deuteron
145	When 6d orbital is complete, the entering electron goes into:	A. 7f. B. 7s. C. 7p. D. 7d.
146	The total values of magnetic quantum number of subshell are five, the subshell is	A. S-subshell B. P-subshell C. D-subshell D. F-subshell
147	Cathode rays drive a small paddle wheel placed in their path. This observation shows that	A. Cathode rays travel in straight lines B. Cathode rays are negatively charged C. Cathode rays produce x-rays D. Cathode rays are material particles having momentum
148	Which of the following particles has longest wavelength, if they have same speed:	A. Proton. B. Neutron. C. Electron. D. Positron.
149	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
150	Bohr model of atom is contradicted by:	A. Planck's quantum theory B. Pauli's exclusion theory C. Heisenberg's uncertainty principle. D. All of above.
151	The wave number of light emitted by a certain source is 2 x 10^5m. The wavelength of this light will be:	A. 500 NM. B. 500 M. C. 200 NM. D. 5 x 10⁷m
152	Negatively charged particle nature of cathode rays was first demonstrated in 1895 by:	A. Millikan. B. J. Perrin. C. Hittrof D. J.J. Thomson.
153	Quantum number values for 2p orbitals are	A. n = 2, l = 1 B. n = 1, l = 2

153	Quantum number values for 2p orbitals are	C. n = 1, l = 0 D. n = 2, l = 0
154	The electronic configuration of an atom/ion can be defined by the following	A. Aufbau principle B. Pauli's exclusion principle C. Hund's Rule D. All the above
155	Find the magnetic moment of a divalent ion in aqueous solution if its atomic number is 25	A. 3.0 BM B. 4.9 BM C. 5.9 BM D. 6.9 BM
156	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
157	Which of the following was discovered first:	A. Charge to mass ratio of electrons. B. Mass of electrons. C. Charge of electrons. D. All of above at same time.
158	The spectrum of He is expected to be similar to that of	A. H B. Na C. He⁺ D. Li⁺
159	The wave number of the light emitted by a certain source is $2 \times 10^6 m^{-1}$. The wavelength of this light will be	A. 500 nm B. 500 m C. 200 nm D. 5 x 10⁷m
160	Which of the following is not a property of cathode rays	A. They can produce x-rays when they strike a heavy metal anode B. They can cause reduction reaction C. They produce fluorescence in rare earth and minerals D. They comprise neutral particles
161	The radiations with wavelength shorter than violet light are called	A. Ultraviolet B. Infrared C. Microwave D. Radio frequency
162	The mass of the neutron is of the order of	A. 10⁻²³kg B. 10⁻²⁴kg C. 10⁻²⁶kg D. 10⁻²⁷kg
163	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< ....
164	The number of neutrons in the element $^{9}_{4}Be$ is	A. 4 B. 5 C. 9 D. 13
165	The range of visible spectrum is	A. 300 - 600 nm B. 600 - 900 nm C. 400 - 750 nm D. 100 - 300 nm
166	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