


Atomic Structure

Sr	Questions	Answers Choice
1	The order of frequency of the following radiations ultraviolet, visible, infrared and microwave is	<p>A. Microwave &gt; infrared &gt; visible &gt; ultraviolet</p> <p>B. Visible &gt; ultraviolet &gt; microwave &gt; infrared</p> <p>C. Ultraviolet &gt; visible &gt; infrared &gt; microwave</p> <p>D. Infrared &gt; microwave &gt; ultraviolet &gt; visible</p>
2	The wave length of electron as wave is 0.5 nm. What is the wave length in meter	<p>A. 5×10^{-9}</p> <p>B. 5×10^{-12}</p> <p>C. 5×10^{-6}</p> <p>D. 5×10^{-10}</p>
3	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	<p>A. 12 and 4</p> <p>B. 16 and 5</p> <p>C. 16 and 4</p> <p>D. 12 and 5</p>
4	The symbol of the element whose atoms have the outer most electronic configuration $2s^2 2p^3$ is	<p>A. N</p> <p>B. Li</p> <p>C. P</p> <p>D. Na</p>
5	The radius of first orbit of H-atom is	<p>A. 4.75 \AA</p> <p>B. 3.84 \AA</p> <p>C. 8.4 \AA</p> <p>D. 0.529 \AA</p>
6	Quantum number values for 2p orbitals are	<p>A. $n = 2, l = 1$</p> <p>B. $n = 1, l = 2$</p> <p>C. $n = 1, l = 0$</p> <p>D. $n = 2, l = 0$</p>
7	Schrodinger wave equation describes electron completely because	<p>A. It describes a set of four quantum number</p> <p>B. It describes the particle nature of electron</p> <p>C. It measures wavelength of electron</p> <p>D. It describes electron moving in specific orbit</p>
8		<p>A. Neutrons are attracted by nucleus</p> <p>B. Neutrons carry out nuclear reactions</p> <p>C. Neutrons carry no charge</p> <p>D. Neutrons are electromagnetic radiations</p>
9	The charge over mass ratio of electron is:	<p>A. $1.6 \times 10^{-1} \text{ Kg}^{-1}$</p> <p>B. $9.1 \times 10^{-31} \text{ Kg}^{-1}$</p> <p>C. $1.7588 \times 10^{11} \text{ Kg}^{-1}$</p> <p>D. $6.62 \times 10^{-34} \text{ Kg}^{-1}$</p>

10	Smallest charge of electricity that has been measured so far is	A. Charge on a-rays B. Charge on electron (1.602×10^{-19} C) C. Charge on x-rays D. Charge on gamma rays
11	$E = hv$ is the	A. Spectral equation B. Plank's equation C. de Broglie's equation D. None of these
12	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.
13	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
14	The value of charge on electron is	A. 1.602×10^{-19} coulombs B. 1.602×10^{-18} coulombs C. 1.602×10^{-17} coulombs D. 1.602×10^{-16} coulombs
15	Which of the following is not charged particle	A. Proton B. Electron C. Neutron D. Hydrogen nucleus
16	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
17	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. $n = 1, l = 3$
18	The maximum number of electrons in a subshell for which $l = 3$ is	A. 14 B. 10 C. 8 D. 4
19	With the reference of w/m ratio of anode rays, the e/m ratio of cathode rays is:	A. Greater. B. same. C. Smaller. D. Not fixed.
20	Rutherford's atomic model suggests the existence of	A. Atom B. Nucleus C. alpha particle D. Measons
21	Which of the following particles has longest wavelength, if they have same speed:	A. Proton. B. Neutron. C. Electron. D. Positron.
22	Which of the following is not a sub-atomic particle	A. Electron B. Proton C. Neutron D. Deuteron
23	The spectrum of helium is expected to be similar to that of	A. H B. Li C. Na D. He
24	When the electron jumps from third, fourth, fifth orbits to the second orbit, the transitions are known as	A. Paschen B. Pfund C. Balmer D. Brackett
25	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
26	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

27	Their e/m, ratio resembles with that of electrons	<p>A. Alpha rays B. Beta rays C. Gamma rays D. X-rays</p>
28	$n + l$ value for 4f will	<p>A. 2 B. 5 C. 7 D. 9</p>
29	In the atomic emission spectrum the lines which appear bright, appear dark in absorption spectrum because	<p>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</p>
30	The four quantum numbers of the valency electron of potassium are	<p>A. 4,1,1,1/2 B. 4,0,0,1/2 C. 4,1,0,1/2 D. 4,4,0,1/2</p>
31	Cathode rays drive a small paddle wheel placed in their path. This observation shows that	<p>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</p>
32	Energy of electron in an orbit according to Bohr theory is negative due to	<p>A. Repulsion of electrons in the same orb B. At infinity energy is zero and a traction towards nucleus decreases energy C. Electron has negative charge D. Product of positive nuclear charge and negative charge is negative</p>
33	The total number of orbitals in a shell with principal quantum number 'n' is	<p>A. $2n$ B. $2n^2$ C. n^2 D. $n + 1$</p>
34	When potassium metal is exposed to violet light	<p>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</p>
35	The order of distance between the various Bohr orbits is	<p>A. $r_2 - r_1 > r_3 - r_2 > r_4 - r_3 > \dots$ B. $r_1 > r_2 > r_3 > r_4 > \dots$ C. $r_2 - r_1 < r_3 - r_2 < r_4 - r_3 < \dots$ D. $r_2 - r_1 > r_3 - r_2 < r_4 - r_3 < \dots$</p>
36	The rules which describe the distribution of electron in atomic energy levels are Auf-ban principle, Pauli's exclusion principle. Hund's rule. The Pauli exclusion principle refers to the	<p>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</p>
37	The nature of the positive rays depend on	<p>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</p>
38	In Millikan method for determination of charge on electron the air in the chamber is ionized by	<p>A. Protons B. Electric field C. X-rays D. α - particles</p>
39	The arrangement of subshells in the ascending order of their energy on complete filling of 4f subshell the entering electrons goes to	<p>A. 5s B. 5p C. 5d D. 5f</p>
40	The orbitals having $n + l = 5$ are	<p>A. 2p, 3d, 3s B. 3p, 3d, 5s C. 3s, 4p, 4d D. 5s, 4p, 3d</p>
41	The electron in an atom	<p>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</p>

42	The wave number of light emitted by a certain source is $2 \times 10^5 \text{ m}^{-1}$. The wavelength of this light will be:	A. 500 NM. B. 500 M. C. 200 NM. D. $5 \times 10^{-7} \text{ m}$
43	Neutron was discovered by:	A. Chadwick. B. Bohr. C. Rutherford. D. Plank.
44	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.
45	The quantum number which describes the shape of the orbital is	A. Principle quantum number B. Spin quantum number C. Azimuthal quantum number D. Magnetic quantum number
46	The wave number of the light emitted by a certain source is $2 \times 10^6 \text{ m}^{-1}$. The wavelength of this light will be	A. 500 nm B. 500 m C. 200 nm D. $5 \times 10^{-7} \text{ m}$
47	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
48	The range of visible spectrum is	A. 300 - 600 nm B. 600 - 900 nm C. 400 - 750 nm D. 100 - 300 nm
49	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
50	Which of the following element's outermost orbits last electron has magnetic quantum number $m=0$?	A. Na B. O C. Cl D. N
51	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.
52	The configuration $1s^2 2s^2 2p^5 3s^1$ shows	A. Excited state of O^{2-} B. Excited state of neon C. Excited state of fluorine D. Ground state of fluorine atom
53	Orbital having same energy is called:	A. Hybrid orbital. B. Valence orbital. C. Degenerate orbital. D. D-orbital.
54	The uncertainty principle was stated by	A. De Broglie B. Heisenberg C. Einstein D. Schrodinger
55	Heaviest particle is	A. Meson B. Neutron C. Proton D. Electron
56	When 6d orbital is complete, the entering electron goes into:	A. 7f. B. 7s. C. 7p. D. 7d.
57	The size of electronic shell is described by	A. Azimuthal Q. no B. Magnetic Q.No C. Spin Q. No D. Principle Q. No
58	When 6s orbital is complete then next electron goes to	A. 6p B. 6d C. 5d D. 4f
59	Rutherford's model of atom failed because:	A. The atom did not have a nucleus and electrons B. It did not account for the attraction b/w protons and neutrons

59	Rutherford's model of atom failed because.	C. It did not account for the stability of the atom. D. There is actually no space b/w the nucleus and the electrons.
60	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 spitting of alpha-particles. C. These particles were discovered by natural radioactivity. D. None of above.
61	The degenerate orbitals p-sub shell are	A. 2 B. 3 C. 5 D. 7
62	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. Pauli exclusion principle D. Aufbau principle
63	Anode is the surface on which probability of finding electron is:	A. 50% B. Less than 10%. C. More than 95%. D. Zero.
64	For principle quantum number $n=4$, the total number of orbitals having $l = 3$ is	A. 3 B. 7 C. 5 D. 9
65	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
66	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 increases for higher value of Z
67	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. photosensitivity
68	The value of R (Rydberg's constant) is _____ m^{-1}	A. 1.0974×10^7 B. 1.0842×10^7 C. 1.082×10^{-7} D. Both a and b
69	Pauli's principle is applicable to	A. Degenerate orbitals B. Two electrons in the same orbital C. One electron D. None
70	A 4f orbital has	A. one node B. two nodes C. three nodes D. four nodes
71	The de-Broglie wavelength of a particle with mass 1g and velocity 100 m/s is	A. $6.63 \times 10^{-33} m$ B. $6.63 \times 10^{-34} m$ C. $6.63 \times 10^{-35} m$ D. $6.65 \times 10^{-35} m$
72	The value of Planck's constant ' h ' is	A. $6.625 \times 10^{-34} J \cdot s$ B. $6.625 \times 10^{-34} J \cdot s$ C. $6.625 \times 10^{-34} KJ$ D. $6.625 \times 10^{-34} K \cdot Cal$
73	The credit of discovering neutron goes to	A. Rutherford B. Langmuir C. Chadwick D. Austen
74	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
75	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. Remains same


	increases away from the nucleus, the energy difference between the orbits	<p>C. Remaining same</p> <p>D. Orbits coincide</p>
76	The principle quantum number describes	<p>A. The distance from the nucleus</p> <p>B. The shape of the orbital</p> <p>C. The orientation of the orbital</p> <p>D. The spin of the electron</p>
77	Which of the following is not a property of cathode rays	<p>A. They can produce x-rays when they strike a heavy metal anode</p> <p>B. They can cause reduction reaction</p> <p>C. They produce fluorescence in rare earth and minerals</p> <p>D. They comprise neutral particles</p>
78	In which of the following pairs, the numbers of electrons in the outermost shell are different?	<p>A. As,Sb</p> <p>B. Ge,Sn</p> <p>C. In,pt</p> <p>D. Se,Te</p>
79	Which have better penetrating power	<p>A. Alpha rays</p> <p>B. Beta rays</p> <p>C. Gamma rays</p> <p>D. X-rays</p>
80	Splitting of spectral lines of the hydrogen atom under the influence or magnetic field is called	<p>A. Stark effect</p> <p>B. Zeeman effect</p> <p>C. Compton effect</p> <p>D. Photoelectric effect</p>
81	Charge of an electron is:	<p>A. 1.6×10^{-19} C</p> <p>B. 9.1×10^{-34} C</p> <p>C. 1.7588×10^{-11} C</p> <p>D. 6.62×10^{-34} C</p>
82	An orbital can accommodate maximum two electrons with opposite spins according to	<p>A. Heisenberg's principle</p> <p>B. Aufbau principle</p> <p>C. Hund's rule</p> <p>D. Pauli exclusion principle</p>
83	Effective magnetic moment of Sc^{3+} ion is	<p>A. 1.73</p> <p>B. 0</p> <p>C. 5.92</p> <p>D. 2.83</p>
84	When the 6d orbital is completed the entering electron goes into	<p>A. 7f</p> <p>B. 7s</p> <p>C. 7p</p> <p>D. 7d</p>
85	The orbital in Rutherford's model is	<p>A. Spiral</p> <p>B. Circular</p> <p>C. Both</p> <p>D. None</p>
86	Number of neutrons in heavy hydrogen atom is	<p>A. 0</p> <p>B. 1</p> <p>C. 2</p> <p>D. 3</p>
	When electron jumps from $n=2, 3, 4, 5$ orbit to $n=1$ orbit in the hydrogen	<p>A. Lyman series</p> <p>B. Balmer series</p>

87	When electron jumps from $n_2 = 2, 3, 4, 5, \dots$ orbit to $n_1 = 1$ orbit in the hydrogen atom, the radiations emitted give the spectral lines	B. Balmer series C. Paschen series D. Brackett series
88	Four d-orbitals contain four lobes while fifth contains only two lobes the orbital is	A. dxy B. dxz C. dz^2 D. $dx^2 - y^2$
89	An electron with $n = 3$, $l = 2$ will be in the sub-shell	A. 3p B. 3d C. 3f D. 3s
90	Rutherford's planetary like picture of the atomic model 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
91	The ratio of the ionization energy of H and Be^{3+} is	A. 1 : 1 B. 1 : 3 C. 1 : 9 D. 1 : 16
92	The number of neutrons in the element ${}^9_4\text{Be}$ is	A. 4 B. 5 C. 9 D. 13
93	Which of the following is not isoelectronic?	A. Na^+ B. Mg^{2+} C. O^{2-} D. Cl^-
94	The number of electrons in the M shell of the element with atomic number 24 is	A. 24 B. 12 C. 13 D. 8
95	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
96	The valence orbital configuration of an element with atomic number 23 is	A. $3d^5$ B. $3d^3, 4s^2$ C. $3d^3, 4s^1$, $4p^1$ D. $3d^2, 4s^2, 4p^1$
97	Which of the following orbitals have a dumb bell shape?	A. s B. p C. d D. f
98	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.
99	Orbitals having same energy are called	A. Hybrid orbitals B. Valence orbitals C. Degenerate orbitals D. D-orbitals
100	Alpha rays consist of:	A. Neutrons. B. Helium nucleus. C. Protons. D. Hydrogen nucleus.
101	Quantum number value for 2p orbitals are:	A. $n=2, l=1$ B. $n=1, l=2$ C. $n=, l=0$ D. $n=2, l=0$
102	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
103	Question Image	A. Plank's equations B. de Broglie's equations C. Heisenberg's equation D. None

A. 3

104	The total number of possible values of magnetic quantum number for the value of $l=3$ is	B. 1 C. 5 D. 7
105	Photons of yellow colour are _____ energetic than violet colour	A. More B. Less C. Equal D. None
106	No cathode rays are produced in the discharged tube when gas is under ordinary pressure even if voltage of 5000 to 10000 is applied. 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
107	The number of spherical nodes in 3p orbitals are	A. One B. Three C. Non D. Two
108	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
109	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
110	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
111	Mass of simple electron is:	A. 9.1×10^{-31} kg B. 9.1×10^{-30} kg C. 1.66×10^{-31} kg D. 9.1×10^{-31} kg
112	The total number of orbitals possible for the quantum number n is	A. n B. n^2 C. $2n$ D. $2n^2$
113	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
114	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

115	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.
116	The limiting line of Balmer series in hydrogen spectrum lies in	A. Visible regions B. Ultraviolet region C. Infrared region D. x-rays region
117	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
118	Subsidiary quantum number specifies	A. size of orbital B. shape of orbital C. orientations of orbitals D. Nuclear stability
119	Rutherford's experiment led to the discovery of	A. Nucleus B. Electron C. Proton D. alpha particle
120	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
121	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
122	The spectrum of He is expected to be similar to that of	A. H B. Na C. He^{+} D. Li^{+}
123	The divisibility of atom was shown by	A. Stoney B. J.J. Thomson C. Millikan D. Rutherford
124	If the radius of first Bohr orbit be a_0 , then the radius of third Bohr orbit would be	A. $3 \times a_0$ B. $6 \times a_0$ C. $9 \times a_0$ D. $\frac{1}{2} \times a_0$
125	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
126	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
127	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
128	Azimuthal quantum number of last electron of ${}_{11}\text{Na}$ is	A. 1 B. 2 C. 3 D. 0
129	The mass of the neutron is of the order of	A. 10^{-23} kg B. 10^{-24} kg C. 10^{-26} kg D. 10^{-27} kg
130	Charge to mass ratio of electron was discovered by:	A. Millika. B. Rutherford. C. J.J. Thomson. D. Chadwick.
131	The energy of ionization of an atom is the energy difference between orbital	
132	Which quantum number is sufficient to describe the electron in hydrogen atom?	A. l B. n C. m D. s

133	The velocity of photon is:	<p>A. Independent of its wavelength.</p> <p>B. Depends on its wavelength.</p> <p>C. Equal to square of its amplitude</p> <p>D. Depends on its source.</p>
134	Negatively charged particle nature of cathode rays was first demonstrated in 1895 by:	<p>A. Millikan.</p> <p>B. J. Perrin.</p> <p>C. Hittrof</p> <p>D. J.J. Thomson.</p>
135	Charge on electron was discovered by:	<p>A. Millikan.</p> <p>B. Crook.</p> <p>C. Neil Bohr.</p> <p>D. Rutherford.</p>
136	Which one of the following particles has amass $1/1836$ time, that of hydrogen?	<p>A. Neutron.</p> <p>B. Proton.</p> <p>C. Electron.</p> <p>D. Positron.</p>
137	The quantum number which describe the orientation of the orbitals is	<p>A. Spin quantum number</p> <p>B. Principle quantum number</p> <p>C. Azimathal quantum number</p> <p>D. Magnetic quantum number</p>
138	In the ground state of an atom, the electron is present	<p>A. In the nucleus</p> <p>B. In the second shell</p> <p>C. Nearest to the nucleus</p> <p>D. Farthest from the nucleus</p>
139	Proton was discovered by:	<p>A. Chadwick</p> <p>B. J.J. Rhomson</p> <p>C. Millikan.</p> <p>D. Goldstein.</p>
140	Balmer's series is in _____ region	<p>A. Visible</p> <p>B. U V</p> <p>C. I. R.</p> <p>D. None</p>
141	The radius of second Bohr's orbit is	<p>A. 0.053 nm</p> <p>B. 0.053/4 nm</p> <p>C. 0.053 x 4 nm</p> <p>D. 0.053 x 20 nm</p>
142	Spectrum of white light is continuous becuase	<p>A. Colors separated by dark spaces</p> <p>B. There are no boundary lines between the colours</p> <p>C. The radiations are in infrared region</p> <p>D. The radiatins fall in ultraviolet region</p>
143	The number of de-electrons retained in Fe^{2+} (At.No. of Fe = 26) ions is	<p>A. 3</p> <p>B. 4</p> <p>C. 5</p> <p>D. 6</p>
144	The radiations with wavelength shorter than violet light are called	<p>A. Ultraviolet</p> <p>B. Infrared</p> <p>C. Microwave</p> <p>D. Radio frequency</p>
145		<p>A. s</p> <p>B. p</p> <p>C. d</p> <p>D. f</p>
146	The charge of an electron is determined by	<p>A. J.J. Thomson</p> <p>B. Crooks</p> <p>C. Perrin</p> <p>D. R.A.Millikan</p>
147	Which of the atoms has $1s^2, 2s^2, 2p_x^2 2p_y^1 2p_z^1$ configuration	<p>A. Nitrogen</p> <p>B. Carbon</p> <p>C. Fluorine</p> <p>D. Oxygen</p>
148	The wave number of the line emitted is $109.678 \times 10^5 \text{m}^{-1}$ in the Lyman series when electron transition occurs	
149	The e.m value for positive rays maximum for:	<p>A. Oxygen.</p> <p>B. Nitrogen.</p> <p>C. Helium.</p> <p>D. Hydrogen.</p>
150	The nature of positive rays depend on:	<p>A. Nature of discharge tube.</p> <p>B. Nature of resident gas.</p> <p>C. Nature of electrode.</p> <p>D. All of above.</p>

151	The energy of the first electron in helium will be	A. -13.6 eV B. -54.4 eV C. -5.44 eV D. zero
152	Light emitted from a source has its wave length 500nm, then its wave number will be	A. $2 \times 10^{6-1}$ B. $2 \times 10^{7-1}$ C. $5 \times 10^{8-1}$ D. $5 \times 10^{9-1}$
153	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.
154	In the ground state, an element has 13 electrons in its M shell. The element is	A. Copper B. Chromium C. Nickel D. Iron
155	Which of the following has more unpaired d-electrons?	A. Zn^{+2} B. Fe^{+2} C. Ni^{+3} D. Cu^{+2}
156	When electrons revolve in stationary orbits	A. There is no change in energy level B. They become stationary C. They are gaining kinetic energy D. There is increase in energy
157	The radius of first orbit of hydrogen atom	A. 0.329 Å B. 0.429 Å C. 0.529 Å D. 0.229 Å
158	When 3p orbital is complete, the entering electron goes into	A. 4s B. 3d C. 4p D. 4f
159	Neutrons were discovered by	A. Mosely B. Milliken C. Chadwick D. Rutherford
160	The nature of positive ray depends on:	A. The nature of electrode. B. The nature of discharge tube. C. The nature of residual gas. D. All of above.
161	The quantum number which determines the shape of the orbital is	A. principal B. azimuthal C. magnetic D. spin
162	When the electron jumps from second, third, fourth orbit to the first orbit, the transitions are known as	A. Balmer series B. Lyman series C. Pfund series D. Brackett series
163	Cathode rays emitted from cathode are	A. Canal rays B. Protons C. Electrons D. Positrons
164	1 erg of energy corresponds to	A. 6.02×10^{23} J/mol B. 6.02×10^{16} J/mol C. 1 erg/mol D. 10^{-7} J/mol
165	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 D. -3, 0, +3
166	What is the packet of energy called?	A. Electron B. Photon C. Positron D. Proton