Atomic and Nuclear Physics

Sr	Questions	Answers Choice
1	When 1 tonne of coal is burnt then amount of energy is released .	A. 36 x 10⁸ J B. 36 x 10⁹J C. 36 J D. 36 x 10¹⁰J
2	an additional wire used along with live and neutral wire is:	A. cable wire<o:p></o:p> B. earth wire<o:p></o:p> C. grip wire<o:p></o:p> D. hot wire<o:p></o:p>
3	The symbol of atomic mass number is:	A. A B. X C. N D. Z
4	by connecting suitable high resistance in series with galvanometer it will convert into:	A. voltmeter<o:p></o:p> B. galvanometer<o:p></o:p> C. ammeter<o:p></o:p> D. multimeter<o:p></o:p>
5	the power of washing machine is:	A. 700 W<o:p></o:p> B. 750 W<o:p></o:p> C. 650 W<o:p></o:p> D. 800 W<o:p></o:p>
6	The temperature at the centre of sun is.	A. 10 million k B. 20 million k C. 30 million k D. 35 million k
7	When resistances are connected in parallel, the current passing through them is:	A. Same<o:p></o:p> B. Zero<o:p></o:p> C. Different<o:p></o:p> D. Infinite<o:p></o:p>
8	Which among the following radiation has more penetrating power?	A. A beta pareticle B. A gamma particle C. An alpha particle D. None of these
9	One of the isotopes of uranium is $^{238}U_{92}$the number of neutrons in the isotopes is.	A. 92 B. 146 C. 238 D. 330
10	Safe limit of radiations exposure in one year.	A. 4 rem B. 5 rem C. 3 rem D. 6 rem
11	The combined resistance of two identical resistors, connected in series is 8Ω. Their combined resistance in a parallel arrangement will be:	A. 2 Ω<o:p></o:p> B. 4 Ω<o:p></o:p> C. 8 Ω<o:p></o:p> D. 12 Ω<o:p></o:p>

12	the resistance of conductor is inversely to:	A. temperature<o:p></o:p> B. length<o:p></o:p> C. area of cross section<o:p></o:p> D. pressure<o:p></o:p>
13	If we double both the current and the voltage in a circuit while keeping its resistance constant, the power:	A. Remains unchanged<o:p></o:p> B. Halves<o:p></o:p> C. Doubles<o:p></o:p> D. Four time<o:p></o:p>
14	The process of breaking a heavy nucleus after the bombardment of neutrons into two small nuclei is called:	A. Nuclear fission reaction B. Nuclear fusion reaction C. Nuclear Radiation D. Nuclear chain reaction
15	If 2 joules of energy is required to transfer one coulomb of charge from one point to another, the potential difference between these points will be:	A. 1V<o:p></o:p> B. 2V<o:p></o:p> C. 4V<o:p></o:p> D. <o:p></o:p>6V <o:p></o:p>
16	an ideal voltmeter is that which draws:	A. small current<o:p></o:p> B. no current<o:p></o:p> C. high current<o:p></o:p> D. none of these<o:p></o:p>
17	When resistances are connected in series the current passing through them is:	A. Different<o:p></o:p> B. Zero<o:p></o:p> C. The same<o:p></o:p> D. None of these<o:p></o:p>
18	The A.C used in Pakistan has frequency:	A. 60 Hz<o:p></o:p> B. 30 Hz<o:p></o:p> C. 50 Hz<o:p></o:p> D. 130 Hz<o:p></o:p>
19	The phenomenon in which radiations convert the matter into positive and negative ions is called:	A. Radio activity B. Excitation C. Ionization D. Electrolysis
20	Which element is used for the monitoring of thyroid glands?	A. Iodine- 131 B. Phosphorus-32 C. Carbon-14 D. Potassium-40
21	What happen to the atomic number of an element which emits one alpha particle?	A. Increase by 1 B. Stays the same C. Decrease by 2 D. Decrease by 1
22	$100x10^3$ A= :	A. 10⁻³A<o:p></o:p> B. 10⁻²A<o:p></o:p> C. 10 A<o:p></o:p> D. 10⁻¹A<o:p></o:p>
		A. In series<o:p></o:p> B. In parallel<o:p></o:p>

23	How Galvanometer is connected in circuit to detect current:	C. Fixed<o:p></o:p> D. Variable<o:p></o:p>
24	Total energy supplied in driving one coulomb of charge around a complete circuit is called:	A. Potential<o:p></o:p> B. Potential difference<o:p></o:p> C. Electromotive force<o:p></o:p> D. Potential energy<o:p></o:p>
25	The half life of carbon -14 is:	A. 5730 years B. 5740 years C. 5750 years D. 5760 years
26	Which instrument is used to detect current:	A. Galvanometer<o:p></o:p> B. Voltmeter<o:p></o:p> C. Ammeter<o:p></o:p> D. Electroscope<o:p></o:p>
27	Joule's law is W=	A. IR/t<o:p></o:p> B. IRt²<o:p></o:p> C. IR²t<o:p></o:p> D. I²Rt<o:p></o:p>
28	Radiations present in atmosphere due to the presence of different radioactive elements are:	A. Cosmic radiations B. Background radiations C. secondary radiations D. Electromagnetic radiations
29	earth wire is connected with those appliances whose casing is made of:	A. metals<o:p></o:p> B. wood<o:p></o:p> C. glass<o:p></o:p> D. plastic<o:p></o:p>
30	What happen to the atomic number of an element which emits one alpha particle and a beta particles.	A. Increases by 1 B. Stay the same C. Decrease by 2 D. Decrease by 1
31	V^2/R=:	A. Power<o:p></o:p> B. Energy<o:p></o:p> C. Voltage<o:p></o:p> D. Resistance<o:p></o:p>
32	The half of carbon 14 is	A. 5720 years B. 5730 years C. 5740 years D. 5750 years
33	a fuse is connected in series with:	A. neutral wire<o:p></o:p> B. live wire<o:p></o:p> C. earth wire<o:p></o:p> D. cable wire<o:p></o:p>
34	What is the amount of current passing through an electric heater, if it takes 1800C charge pass through it in 3 minute:	A. 16 A<o:p></o:p> B. 10 A<o:p></o:p> C. 100 A<o:p></o:p>

		D. 0.1 A<o:p></o:p>
35	battery is one of the source of:	A. heat<o:p></o:p> B. light<o:p></o:p> C. current<o:p></o:p> D. sound<o:p></o:p>
36	For observing how fast plants are absorbing phosphate fertilizer we use.	A. I.131 B. Ph -32 C. Co-60 D. Ar-40
37	Which element is used to locate the ulcer in brain?	A. Iodine-131 B. Phosphorus-32 C. Carbon-14 D. Potassium-40
38	Radiation was found in:	A. 1896 B. 1895 C. 1897 D. 1898
39	Who discovered the phenomenon of natural radioactivity?	A. Henry Becurial B. Merry Curi C. Perry D. Rutherford
40	The current which does not change its direction is called:	A. A.C<o:p></o:p> B. D.C<o:p></o:p> C. Conventional<o:p></o:p> D. Transient current<o:p></o:p>
41	When a heavy nucleus splits into lighter nuclei,the process would.	A. Release nuclear energy B. absorb nuclear energy C. Release Chemical energy D. Absorb Chemical Energy
42	Which radiations are free of effect of electric and magnetic field?	A. Alpha B. Beta C. Gamma D. Alpha and beta
43	The half -life of carbon is	A. 5730 years B. 5700 years C. 5720 years D. 572 years
44	The half life of radium 226 is	A. 1600 year B. 1610 years C. 1620 years D. 1630 years
45	When a Uranium (92 protons)ejects a beta particle, how many protons are left in the remaining nucleus?	A. 89 Protons B. 90 Protons C. 91 Protons D. 93 Protons
46	The Half life of a certain isotopes is 1 day. What is the quantity of isotopes after 2 days?	A. One half B. One quarter C. One eight D. None of these
47	in a dry cell, chemical energy changes into:	A. mechanical energy<o:p></o:p> B. electrical energy<o:p></o:p> C. potential energy<o:p></o:p> D. kinetic energy<o:p></o:p>
48	The half life of radium - 226 is 1620 years. If N is its total amount then after the four half lives, its left amount will be:	A. 1/2 N B. 1/4 N C. 1/8 N D. 1/16 N
		A. Plants and animals are such strong emitters of carbon 14 B. After a plant or animal dies, it stops in

49	The reason carbon dating work is that.	fresh carbon C. There is so much non radioactive carbon dioxide in the air D. When a plant or animal dies.
50	The number of neutrons in the nucleus of tritium is:	A. 1 B. 2 C. 3 D. 4
51	The symbol of alpha particles is:	A. 4AHe B. 42He C. 0-1B D. 00Y
52	What is the power rating of a lamp connector to a 12 V source when it carries 2.5 A:	A. 4.8W<o:p></o:p> B. 14.5W<o:p></o:p> C. 30W<o:p></o:p> D. 60W<o:p></o:p>
53	As the temperature of a conductor rises, its resistance:	A. Increases<o:p></o:p> B. Increases<o:p></o:p> C. Decreases<o:p></o:p> D. Does not change<o:p></o:p> E. None of these<o:p></o:p>
54	diamond des not conduct electricity, because it has no:	A. free electrons<o:p></o:p> B. free protons<o:p></o:p> C. free neutrons<o:p></o:p> D. free positive charge<o:p></o:p>
55	with the increase in temperature the resistance of pure metals:	A. increases<o:p></o:p> B. decreases<o:p></o:p> C. remains same<o:p></o:p> D. none of these<o:p></o:p>
56	When a uranium (92 protons) ejects a beta particle, how many protons are left in the remaining nucleus?	A. 92 protons B. 91 protons C. 93 protons D. 89 protons
57	for which of following ampere second could be the unit:	A. energy<o:p></o:p> B. current<o:p></o:p> C. charge<o:p></o:p> D. power<o:p></o:p>
58	A digital multimeter is used to measure:	A. Current<o:p></o:p> B. Resistance<o:p></o:p> C. Potential difference<o:p></o:p> D. All of above<o:p></o:p>
59	The commercial unit of electrical energy is:	A. Joule<o:p></o:p> B. Watt<o:p></o:p> C. Kilowatt hour<o:p></o:p> D. Electron volt<o:p></o:p>
60	Which particles are nucleons?	A. Electrons and protons B. Protons and neutrons C. Electrons and neutrons D. Electrons and positrons

61	Isotopes are atoms of same element with different :	A. Atomic mass B. Atomic Number C. Number of proton D. Number of Neutron
62	The galvanometer has been named after the scientist:	A. Lewis<o:p></o:p> B. Lowry bronsted<o:p></o:p> C. Luigi Galvano<o:p></o:p> D. Galvano Einstein<o:p></o:p>
63	The power of small fan is:	A. 40 W<o:p></o:p> B. 50 W<o:p></o:p> C. 60 W<o:p></o:p> D. 80 W<o:p></o:p>
64	the range of galvanometer to measure current is:	A. few amperes<o:p></o:p> B. few micro amperes<o:p></o:p> C. few milli amperes<o:p></o:p> D. mega amperes<o:p></o:p>
65	The unit of electric power is:	A. Volt<o:p></o:p> B. Watt<o:p></o:p> C. Joule<o:p></o:p> D. Coulomb<o:p></o:p>
66	The rating of a fuse wire is always expressed in:	A. ampere-hours<o:p></o:p> B. KWh<o:p></o:p> C. Volts<o:p></o:p> D. Amperes<o:p></o:p>
67	The colour of live wire is:	A. Black or blue<o:p></o:p> B. Green or yellow<o:p></o:p> C. White or grey<o:p></o:p> D. Red or brown<o:p></o:p>
68	the resistance of an ammeter should be:	A. high<o:p></o:p> B. very high<o:p></o:p> C. low<o:p></o:p> D. constant<o:p></o:p>
69	Circuit breaker works on the principle of:	A. Electric current<o:p></o:p> B. Magnetism<o:p></o:p> C. Electromagnetism<o:p></o:p> D. Electrostatics<o:p></o:p>
70	Release of the energy by the sun is due to:	A. Nuclear Fussion B. Nuclear Fission C. Burning of gases D. Chemical reaction
71	The half life of Lead Pb is	A. 10 hour B. 10.10 hours C. 10.6 hours D. 1 year

72	The half life of plutonium $^{236}Pu_{94}$ is:	A. 2.00 years B. 2.35 years C. 2.79 years D. 2.85 years
73	When we double the voltage in a simple electric circuit, we double the:	A. Current<o:p></o:p> B. Power<o:p></o:p> C. Resistance<o:p></o:p> D. Both a and b<o:p></o:p>
74	According to ohm's law V= :	A. I²R<o:p></o:p> B. IR²<o:p></o:p> C. IR<o:p></o:p> D. I/R<o:p></o:p>
75	When a potential of 10 volt is applied across a conductor, a current of 5 miliampere flows through it, the resistance of the conductor will be:	A. 200 ohm<o:p></o:p> B. 2000 ohm<o:p></o:p> C. 0.2 ohm<o:p></o:p> D. 0.002 ohm<o:p></o:p>
76	When a heavy nucleus splits into, lighter nuclei, the process would .	A. Release nuclear energy B. Absorb nuclear energy C. Release chemical energy D. Absorb chemical energy
77	Watt is equal to:	A. Coulomb per second<o:p></o:p> B. Newton per second<o:p></o:p> C. Volt per second<o:p></o:p> D. Joule per second<o:p></o:p>
78	isotopes are atom of same element with different.	A. Atomic mass B. Atomic number C. Number of proton D. Number of electron
79	The equivalent resistance of a parallel combination is:	A. Equal to sum of all resistance<o:p></o:p> B. Is greater than the largest resistance of combination<o:p></o:p> C. Is smaller than the smallest resistance of combination<o:p></o:p> D. All of these<o:p></o:p>
80	The property of substance, which opposes the flow of current through it is called:	A. Resistance<o:p></o:p> B. Reactance<o:p></o:p> C. Resistivity<o:p></o:p> D. None<o:p></o:p>
81	When 1 kg of Uranium -235 is fused then energy released is	A. 67 x 10¹⁰ J B. 67 x 10⁷J C. 67 J D. 7 J
82	By keeping resistance constant if we double the voltage then current will be:	A. Double<o:p></o:p> B. 4 times<o:p></o:p> C. ¼ times<o:p></o:p> D. Half<o:p></o:p>
		A. Heat<o:p></o:p>

83	A thermistor is a dependent resistors:	B. temperature<o:p></o:p> C. energy<o:p></o:p> D. mass<o:p></o:p>
84	Nuclear fission was first observed in	A. 1936 B. 1937 C. 1938 D. 1939
85	Release of energy by the sun is due to	A. Nuclear fission B. Nuclear fusion C. Burning of gases D. Chemical reaction
86	Human skin, in dry conditions, has a resistance of:	A. 20,000 ohm<o:p></o:p> B. 100,000 ohm<o:p></o:p> C. 30,000 ohm<o:p></o:p> D. 2000 ohm<o:p></o:p>
87	The value or current I passing through a conductor is inversely proportional to:	A. Temperature<o:p></o:p> B. Potential difference<o:p></o:p> C. e.m.f.<o:p></o:p> D. resistance<o:p></o:p>
88	Radioactive isotopes present in atmosphere is	A. Cobalt -60 B. Ph-32 C. Carbon -14 D. Carbon -20
89	What type of graph is in between V and I, if metal obeys ohm's law:	A. Curved<o:p></o:p> B. Parabola<o:p></o:p> C. Straight line<o:p></o:p> D. None of these<o:p></o:p>
90	The half life of argon nuclide Ar-40 is:	A. 2 x 10⁸years B. 2 .2x 10⁸years C. 2.4x 10⁸years D. 2.8x 10⁸years