

Physics FSC Part 2 Chapter 21 Online MCQ's Test

Sr	Questions	Answers Choice
1	Charge on an electron was determined by	A. Ampere B. Millikan C. Maxwell D. Bohr
2	The early Greeks believed that matter waves was	A. Discrete B. Continuous C. Both continuous and discrete D. All of above
3	1 amu is equal to	A. 1.0606×10^{-27} kg B. 1.66×10^{-31} kg C. 1.66×10^{-34} kg D. 1.66×10^{-19} kg
4	Radioactivity happen due to the disintegration of	A. Nucleus B. Mass C. Electrons D. Protons
5	The radioactive decay obeys the law	
6	The SI unit of decay constant is	A. m B. m^{-1} C. S^{-1} D. Nm^{-1}
7	The first atomic reactor was introduced by	A. Currie B. Enrico Fermi C. Newton D. Bohr
8	In Wilson cloud chamber, β -particles leave	A. Thin and continuous tracks B. Thick and continuous tracks C. No tracks D. Thin and discontinuous tracks
9	The potential difference between the top and bottom of a cloud chamber is of the order of	A. 290 v B. 400 v C. 1 kv D. None of above
10	One joule of energy absorbed per kilogram of a body is	A. Roentgen B. Grey C. Rem D. Curie
11	The mass spectrum of naturally occurring neon, showing	A. 1 isotope B. 2 isotope C. 3 isotope D. 4 isotope
12	The energy of photon for photoelectric effect is less than	A. 1 MeV B. 2 MeV C. 5 MeV D. 8 MeV
13	In Wilson cloud chamber, if tracks are thick, straight and continuous, then particle is	A. α -particles B. β -particles C. γ -rays D. All
14	Low level radiations effects	A. Less of hair B. Ulceration C. Drop of white blood cells D. All
15	The scientist who suggested the presence of neutron was:	A. Bohr B. Rutherford C. Chadwick D. J.J Thomson
16	The mass of protons is:	A. 1.675×10^{-27} kg B. 1.693×10^{-27} kg C. 1.673×10^{-31} kg

		D. 1.673×10^{-27} kg
17	amu =	A. 1.06×10^{-27} kg B. 1.6606×10^{-27} kg C. 1.520×10^{-21} kg D. 1.6606×10^{-31} kg
18	The mass of proton in amu is:	A. 1.07276 B. 1.7276 C. 1.007276 D. 1.0007276
19	The total charge of any nucleus is:	A. Ze B. Z C. Both a and b D. None of above
20	Both xenon and caesium each have:	A. 41 isotopes B. 36 isotopes C. 43 isotopes D. 33 isotopes
21	The most abundant isotope of neon is:	A. Neon 21 B. Neon 20 C. Neon 22 D. None of above
22	The binding energy for _____ is maximum.	A. Copper B. Glass C. Iron D. Aluminum
23	Those elements whose charge number z is greater than _____ are unstable:	A. 80 B. 79 C. 82 D. 83
24	The unit of radioactivity is:	A. Becquerel B. Henry C. Pascal D. Joule
25	Rutherford performed an experiment on a nuclear reaction in:	A. 1921 B. 1981 C. 1927 D. 1932
26	Before and after nuclear reaction the number of protons and neutrons:	A. Must be different B. Must be decreased C. Must be increased D. Remains same
27	1 amu =	A. 9.31 MeV B. 931 MeV C. 9.031 MeV D. None of above
28	James Chadwick discovered:	A. Proton B. Positron C. Neutron D. Electron
29	Binding energy per nucleus for uranium is above:	A. 6.7 MeV B. 7.7 MeV C. 6.9 MeV D. 7.9 MeV
30	Nuclear fission was discovered by:	A. Otto Hahn B. Fritz Strassmann C. Both a and b D. Michaelson
31	Controlling rods inserted into the reactor are of metal:	A. Aluminium B. Cadmium C. Magnesium D. Copper
32	The binding energy for nucleus A is 7.7 MeV and that for nucleus B is 7.8 MeV. Which nucleus has the larger mass?	A. Nucleus A B. Nucleus B C. Less than nucleus D. None of these
33	How many neutrons are there in the nuclide Zn^{66} ?	A. 22 B. 30 C. 36 D. 66

34	Mass equivalent of 931 MeV energy is:	A. 6.02×10^{-23} kg B. 1.766×10^{-27} kg C. 2.67×10^{-29} kg D. 6.02×10^{-87} kg
35	The energy equivalent of 1 kg of matter is about:	A. 10^{-15} J B. 1 J C. 10^{-12} J D. 10^{-17} J
36	The radio active nuclide ${}_{86}\text{Ra}^{228}$ decays by a series of emissions of three alpha particles and one beta particle. The nuclide X finally formed is:	A. ${}_{64}\text{X}^{220}$ B. ${}_{86}\text{X}^{222}$ C. ${}_{84}\text{X}^{216}$ D. ${}_{88}\text{X}^{215}$
37	A radio active substance has a half life of four months. 3 -fourth of the substance will decay in:	A. 6 months B. 8 months C. 12 months D. 16 months
38	Gamma radiations are emitted due to:	A. De-excitation of atom B. De-excitation of nucleus C. Excitation of atom D. Excitation of nucleus
39	Unit of decay constant λ is:	A. ms B. m^{-1} C. m D. S^{-1}
40	Unit of decay constant λ is:	A. ms B. m^{-1} C. m D. S^{-1}
41	Which of the following basic force is able to provide an attraction between two neutrons:	A. Electrostatic and nuclear b B. Electrostatic and gravitational C. Gravitational and strong nuclear D. Only nuclear force
42	Bottom quark carries charge :	A. $2/3 e$ B. $-2/3 e$ C. $+1/3 e$ D. $-1/3 e$
43	The number of Neutron is ${}^{238}\text{U}_{92}$ is	A. 92 B. 238 C. 146 D. 330
44	The number of protons in any atom are always equal to the number of	A. Neutrons B. Electrons C. Positrons D. Mesoris
45	The number of neutrons in Li are	A. 2 B. 3 C. 4 D. 7
46	The charge number of Ba is.	A. 197 B. 141 C. 56 D. 85
47	The number of neutron present in a nucleus is given by	A. $N = A + Z$ B. $N = A - z$ C. $N = Z - A$ D. $N = A \times Z$
48	The number of Isotopes of cesium are.	A. 4 B. 32 C. 22 D. 36
49	Both Xenon and cesium have	A. 33 isotopes B. 34 isotopes C. 36 isotopes D. 35 isotopes
50	Number of Isotopes of Neon gas are	A. 2 B. 3 C. 4 D. 1
51	The mass spectrum of naturally occurring neon shows the most abundant isotope has atomic mass.	A. 19 B. 20 C. 21 D. 22

52	What is difference is isotopes	A. Number of protons B. Number of neutrons C. Number of electrons D. Charge number
53	The binding energy per nucleon is maximum for	A. Helium B. Iron C. Potassium D. Radium
54	Binding energy for deuteron nucleus is given by	A. 2.8 MeV B. 2.23 MeV C. 2.28 MeV D. 2.25 MeV
55	The amount of energy equivalent to 1 a.m.u is	A. 931.5 MeV B. 93.15 MeV C. 9.315 MeV D. 2.224 MeV
56	Which is true for both alpha particle and gama rays.	A. They cause ionization in air B. They can be deflected by electric field C. They can be deflected by magnetic field D. The y can penetrate a few millimeters of aluminium
57	Energy released by conversion of 1 amu is	A. 200 MeV B. 931 MeV C. 233 MeV D. 243 MeV
58	Binding energy per nucleon is maximum for	A. Platinum B. Iron C. Uranium D. Lead
59	The charge of an alpha particle is equal to	A. -e B. +e C. -2e D. 2e
60	When a nucleus emits an alpha particle, its atomic mass decreases by	A. 1 B. 2 C. 3 D. 4
61	The reciprocal of decay construct lamda of a radioactive element is.	A. Half life B. Mean life C. Curie D. total life
62	Which one of the following is not affected by electric or magnetic field.	A. Beta rays B. Gama ryas C. Alpha rays D. Electron
63	There is no charge in A and Z of any radioactive element by the emission of.	A. Alpha particle B. Beta particle C. Gama particle D. X- rays
64	The activity of radioactive sample	A. Is constant B. Increases with time C. Decreases linearly with time D. Decreases exponentially with time
65	When gama rays are emitted, the nuclear mass.	A. Decreases by 4 units B. Does not change C. Increases by 2 units D. Increase by 1 unit
66	Marie Curie and Pierre Curie discovered.	A. Uranium B. Uranium and Radium C. Polonium and radium D. Radium
67	X-rays are similar in nature to.	A. Gama rays B. Beta rays C. Alpha rays D. Cathode rays
68	The force which is responsible for the breaking up of the radioactive element is.	A. Weak nuclear force B. Strong nuclear force C. Electromagnetic force D. Gravitational force

69	Half life of radon gas is	A. 3.8 minutes B. 3.8 days C. 3.8 months D. 3.8 years
70	Materials can be identified by measuring their	A. Mass B. Half life C. Both a and b D. None of a,b,c
71	Half life of Uranium -239 is	A. 26.5 minutes B. 24.5 minutes C. 25.5 minutes D. 23.5 minutes
72	The half life of radioactive elements depends upon	A. Temperature B. Nature of element C. Amount of the radioactive substance D. Pressure
73	The Unit of decay constant.	A. Second B. (second) ⁻¹ C. m ⁻¹ D. mk
74	By emitting Beta particle and gama particle simultaneously the nucleolus changes in its charges by	A. N B. N/2 C. N/4 D. 3N/4
75	The charge on Beta particle is	A. +e B. -e C. -2e D. None of these
76	Alpha particle carries a charge.	A. -e B. +2e C. -2e D. No charge
77	Cobalt -60 is the source for	A. Alpha rays B. Gama rays C. Beta rays D. Neutron
78	The mass of beta particle is equal to mass of.	A. Protons B. Electrons C. Neutrons D. Boron
79	Which particle has larger range in air.	A. Alpha rays B. Gama rays C. Beta rays D. Neutron
80	The mass of beta particle is equal to the mass	A. Proton B. Neutron C. Electron D. Photon
81	A positron is a particle having.	A. Mass equal to electron B. Charge equal to electron C. Mass equal to mass of electron but charge opposite to charge of electron. D. Mass equal to proton
82	If the following particle have the same energy, which particle has the shortest wave length.	A. alpha particle B. Neutron C. Beta particle D. Proton
83	Which of the following is similar to electron.	A. Beta particle B. Alpha particle C. Neutron D. Proton
84	How many times, the alpha particle is more massive than electrons.	A. 6332 B. 7332 C. 8332 D. 9332
85	In nuclear radiation , track of alpha particle is.	A. Thin B. Discontinuous C. Erratic D. Continuous

86	When a nucleus emits alpha particle its atomic mass decreases by	<p>A. 1</p> <p>B. 2</p> <p>C. 3</p> <p>D. 4</p>
87	GM counter uses	<p>A. Alcohol only</p> <p>B. Bromine</p> <p>C. argon</p> <p>D. Neon and bromine</p>
88	A device that shows the visible path of ionizing particle is called.	<p>A. GM counter</p> <p>B. Solid state detector</p> <p>C. Scalar</p> <p>D. Wilson cloud chamber</p>
89	The dead time of G.M tube is.	<p>A. 10^{-1} sec</p> <p>B. 10^{-6} sec</p> <p>C. 10^{-4} sec</p> <p>D. 10^{-8} sec</p>
90	Energy needed to produce an electron hole in solid state detector is.	<p>A. 1 to 2 eV</p> <p>B. 3 to 4 eV</p> <p>C. 6 to 7 eV</p> <p>D. 8 to 9 eV</p>
91	When nitrogen is bombarded by alpha particles nitrogen nucleus changes into	<p>A. Oxygen</p> <p>B. Carbon</p> <p>C. Barium</p> <p>D. Helium</p>
92	The quantity of U in the naturally occurring uranium is.	<p>A. 0.2%</p> <p>B. 0.3%</p> <p>C. 0.7%</p> <p>D. 0.4%</p>
93	The place for storing the nuclear waste is	<p>A. Ocean</p> <p>B. Damping in earth</p> <p>C. Damping in desert</p> <p>D. Bottom of old salt mines</p>
94	Nuclear fission chain reaction is controlled by using.	<p>A. Cadmium rods</p> <p>B. Iron rods</p> <p>C. Platinum rods</p> <p>D. Steel rods</p>
95	The moderator used in a nuclear reactor	<p>A. Sodium</p> <p>B. Uranium</p> <p>C. Graphite</p> <p>D. Cadmium</p>
96	Hydrogen bomb is an example of.	<p>A. Nuclear fission</p> <p>B. Nuclear fusion</p> <p>C. Chain reaction</p> <p>D. Chemical reaction</p>
97	Absorbed Dose 'D' is defined as	<p>A. m/E</p> <p>B. E/C</p> <p>C. C/m</p> <p>D. E/m</p>
98	1 gray is equal to.	<p>A. 1 JKg⁻¹</p> <p>B. 1KJ⁻¹</p> <p>C. 1JKg</p> <p>D. 1 JKg⁻²</p>
99	For workers in nuclear facilities is, a weekly does of is normally considered safe	<p>A. 1.0 msv</p> <p>B. 5.0 msv</p> <p>C. 2.0 msv</p> <p>D. 3.0 msv</p>
100	Curie is unit of.	<p>A. Conductivity</p> <p>B. Binding energy</p> <p>C. Radioactivity</p> <p>D. Resistivity</p>
101	The background radiation to which we are exposed, on the average is.	<p>A. 1 mSv per year</p> <p>B. 2 mSv per year</p> <p>C. 3 mSv per year</p> <p>D. 4 mSv per year</p>
102	Gamma rays from cobalt -60 are used for treatment of.	<p>A. Circulation of blood</p> <p>B. Cancer</p> <p>C. Heart Attack</p> <p>D. Thyroid glands</p>
103	Circulation of blood is studied by radio isotope.	<p>A. Cobalt -60</p> <p>B. Phosphorus -32</p> <p>C. Sodium -24</p> <p>D. Iodine -131</p>

104	The most useful tracer is.	A. Strontium -90 B. Iodine -31 C. Cobalt -60 D. Carbon -14
105	Iodine -131 is used for the treatment by	A. Bones B. Eyes C. thyroid glands D. Lungs
106	Various types of cancer are treated by	A. Carbon -14 B. Nickel -63 C. Cobalt -60 D. Strontium -90
107	Which of the following is typical source of alpha particle.	A. Strontium -94 B. Radon -222 C. Cobalt -60 D. Zinc sulphate
108	Mass of meson is	A. Greater than proton B. Less than proton C. Equal to proton D. Equal to neutron
109	Which one belongs to lepton's group	A. Electron B. Muons C. Neutrons D. All of these
110	A pair of quark and anti quark makes a.	A. Meson B. baryon C. Lepton D. Baryon
111	The particles equal in mass but greater than proton are.	A. Mesons B. Baryons C. Leptons D. Hadrons
112	A proton consists of quarks which are.	A. Two up, one down B. One up, two down C. All up D. All down
113	Electrons are	A. Hadrons B. Leptons C. Quarks D. Baryons
114	Two down and one up quarks make	A. Proton B. Neutron C. photon D. Positron
115	Cosmic rays consist of	A. Protons B. High energy photons C. Positron D. All of above
116	The types of quarks are.	A. 2 B. 3 C. 4 D. 6
117	Subatomic particles are divided into groups.	A. Photon B. Leptons C. Hadrons D. All of these
118	Two up quarks and one down quarks makes a	A. Proton B. Neutron C. Photon D. Meson
119	The building blocks of protons and neutrons are called.	A. Ions B. Electrons C. Positrons D. quarks
120	Which of the following are not hadrons.	A. Muons B. Mesons C. Positrons D. Neutrons
121	Particles equal or greater in mass than of protons are called.	A. Baryons B. Leptons C. Mesons

D. Quarks

122 Which pair belongs to hadrons.

- A. Protons and Neutrons
- B. Neutrons and electrons
- C. Photons and electrons
- D. positrons and electrons

123 The particles which do not experience strong force are called.

- A. Baryons
- B. Hadrons
- C. Mesons
- D. Laptons