MDCAT Physics Chapter 16 Nuclear Physics MCQ's Test

Sr	Questions	Answers Choice
1	The example of nuclear fusion is:	A. Formation of barium and krypton from uranium B. Formation of plutonium -235 from uranium -235 C. Formation of helium from hydrogen D. Formation of water from hydrogen and oxygen
2	Which row is correct for fission and for fusion?	A. Produces larger nuclei B. Produces larger nuclei C. Produces smaller nuclei D. Produces smaller nuclei
3	A radioactive isotope □□□ □ decays consecutively to □□□ □ the particles emitted are:	A. One □ and one □ B. Two □ and one □ C. e □ and two □ D. Two □ and two □
4	The most penetrating radiations out of the following is that of	A. □-rays B. β-rays C. α-particles D. X-rays
5	□, □ □□□ radiations come out of radioactive substance:	A. Spontaneously B. When it is put in a reactor C. When it is heated D. Under pressure
6	The mother and daughter elements with the emission of □ − □□□□, are called:	A. Isotopes B. Isobars C. Isomers D. Isodiapheres
7	For atomic nucleus, the binding energy per nucleon with increase in mass number:	A. Increases continuously B. Remains same C. Decrease continuously D. First increases and then decreases with increase in mass number
8	During a negative β-decay	A. An atomic electron is ejected B. A neutron in the nucleus decays emitting an electron C. An electron which already present within the nucleus is ejected D. A part of binding energy of nuclei is converted into electron
9	The fusion of hydrogen into helium is more likely to take place:	A. At high temperature and high pressure B. At high temperature and low pressure C. At low temperature and low pressure D. At low temperature and high pressure
10	Beta particles have less ionizing power than that of alpha particles because:	A. Their smaller energy B. Their smaller mass C. Their smaller density D. Their smaller charge
11	Which of the following have maximum ionization power?	A. □ −rays B. □ −rays C. □ −rays D. Same for all
12	Due to emission of □+ − □□□□:	A. Mass of the nucleus increases B. Mass of the nucleus decreases C. Charge on the nucleus increases D. Charge number decreases
13	The uranium Nucleus □□□ □ undergoes successive decays, emitting respectively □ − □□□.□ − □□□ □□□ − □□□□. What is the atomic number and atomic mass of the	A. 90, 238 B. 91, 234

	resulting nucleus:	C. 92, 236 D. 92, 238
14	The half-life of a certain element is 3.5 days at STP. If the temperature is doubled and pressure is reduced to half then half-life of the same element will be:	A. 1.75 days B. 3.5 days C. 7 days D. 14 days
15	Half-life of radon gas is:	A. 1620 years B. 3.8 days C. 7 days D. 11 days
16	The more readily fissionable isotope of uranium has an atomic mass of:	A. 220 B. 230 C. 235 D. 240
17	Three quarks make up a:	A. Leptons B. Mesons C. Baryons D. Quark
18	Because of large mass when □ −paricle enters the atom or molecule it:	A. Moves in zigzag path B. Moves along straight line C. Moves along circular path D. None of these
19	If the radioactive substance reduces to □ □□ PHYSICS of its original mass in 40 days then its half-life is:	A. 10days B. 20days C. 40days D. 4days
20	The activity of a radioactive sample is 1.6 curie and half-life is 2.5 days. Its activity after 10 days will be:	A. 0.8 Curie B. 0.1Curie C. 0.4 Curie D. 0.16 Curie