MDCAT Physics Chapter 16 Nuclear Physics MCQ's Test

Sr	Questions	Answers Choice
1	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
2	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
3	The most penetrating radiations out of the following is that of	A. □-rays B. β-rays C. α-particles D. X-rays
4	The more readily fissionable isotope of uranium has an atomic mass of:	A. 220 B. 230 C. 235 D. 240
5	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
6	In an □ −decay:	A. The parent and daughter nuclei have same number of protons B. The daughter nucleus has one proton more than parent nucleus C. The daughter nucleus has two protons less than parent nucleus D. The daughter nucleus has two neutrons more than parent nucleus
7	Nuclear fission experiments show that the neutrons the uranium nuclei into two fragment of about the same size. This process is accompanied by the emission of several:	A. Protons and positrons B. □ −partilces C. neutrons D. Protons and □ −partilces
8	Half-life of radon gas is:	A. 1620 years B. 3.8 days C. 7 days D. 11 days
9	The number of electrons in a nucleus X of atomic number Z and mass number A is:	A. A B. W C. Z D. Y
10	In nuclear fission reaction, when the products are 140X and 94Sr, the number of neutrons emitted is	A. 1 B. 2 C. 5 D. 9
11	Three quarks make up a:	A. Leptons B. Mesons C. Baryons D. Quark
12	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
13	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
		A. An atomic electron is ejected B. A neutron in the nucleus decays

14	During a negative β-decayv	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
15	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
16	When the radioactive nucleus emits a beta particle, the proton neutron ration:	A. increases by one B. Remains same C. Decreases by one D. Decreases by four
17	The half-life of a radioactive element which has only 1//32 of its original mass left after a lapse of 60 days is:	A. 12days B. 10days C. 22days D. 36days
18	A count rate 240 per minute reduces to 30 counts per min in 1 hour. The half-life of source is:	A. 20min B. 60min C. 80min D. 90min
19	When a radioactive nucleus remits a beta particle, the proton neutron ratio:	A. Decreases B. Increases C. Remain same D. None of the above
20	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