

## CHP-414 Special Topics in Nuclear and Radiation Chemistry

Item Text	Option Text 1	Option Text 2	Option Text 3	Option Text 4
Which is the ejectile for following nuclear reaction? $\text{Na}^{23} + n \rightarrow \text{Na}^{24} + \underline{\hspace{1cm}}$	eta	p	gamma	alpha
Which of the following is not special nuclear reaction?	Evaporation	Photonuclear	Spallation	Fission
Which is the projectile for following nuclear reaction? $\text{Cl}^{35} + \underline{\hspace{1cm}} \rightarrow \text{P} + \text{S}^{35}$	p	eta	gamma	alpha
The nuclear reaction $\text{Mg}^{24} (\text{d}, \alpha) \text{Na}^{22}$ shows _____	Conservation of proton only	Conservation of neutron only	Conservation of both proton and neutron	Both Proton and neutron are nonconserved
Which of the following projectile shows transfer nuclear reaction?	eta	p	gamma	d
Which of the following is exotic nucleus?	$\text{Cl}^{35}$	$\text{Na}^{23}$	$\text{Hf}^{154}$	$\text{Mg}^{24}$
Which of the following energy and projectile increases by accelerator device?	Fission energy	Kinetic energy	Potential energy	Excitation energy
In case of Cockcraft-Walton accelerator, in two stage voltage is:	Doubled	Tripled	Quadrapuled	8x-fold
Which of the following is electrostatic accelerator?	Wideroe	Cockroft-Walton	Cyclotron	Synchrocycotron
In linear accelorator, length of cylindrical electrodes _____	Increases	Decreases	Remain same	Random increase or decrease
Which of the following accelerator contain corona cap metal conductor?	Wideroe	Van De Graaf	Cockcroft-Walton	Synchrocycotron
In case of cyclotron accelerator, the charge particles attracted towards dees in circlular path due to:	Electric field only	Magnetic field only	Both electric and magnetic field	Gravitational force
How many dee or dees consist in synchrocycotron accelerator?	1	2	3	4
Relative Biological effectiveness (RBE) = 10 for	gamma	beta	alpha	d
Accumulation of dose (in mrem/year) due to natural sources is high for:	K40	C14	Cosmic radiation	Decay procedure

## CHP-414 Special Topics in Nuclear and Radiation Chemistry

Three mile island accident was happened due to partial meltdown of reactor number: ____	3	2	4	5
Chernobyl accident was happened due to safety test of reactor number: ____	4	3	8	6
Which is radiation absorbed dose?	Absorption of 100 J energy per gram of substance	Absorption of 10 erg energy per gram of substance	Absorption of 100 erg energy per gram of substance	Absorption of 10 erg energy per gram of substance
Which of the following is SI unit of dose?	Rad	Gray	Rontgen	Rem
Which is the initial stage, when interaction of nuclear radiation with biological cell take place?	Physico chemical	Chemical	Physical	Biological