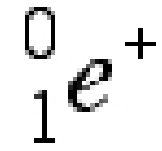
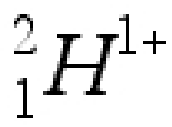
1 carbon-12 + ? -->nitrogen-14

A positron

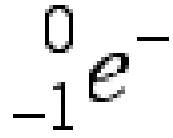


B deuteron



C alpha

D electron



2 What is the product of this nuclear reaction?

$^{13}C + {}^{1}_{0}n \longrightarrow ?$

A carbon-12

$^{12}_{6}C^{6+}$

B nitrogen-14

$^{14}_{7}N^{7+}$

C carbon-14

$^{14}_{6}C^{6+}$

D oxygen-16

$^{16}_{8}O^{8+}$

3 What is the other reactant in this nuclear reaction?

$^{20}Ne + ? \longrightarrow {}^{24}Mg$

A deuteron

$${}_{1}^{2}H^{1+}$$

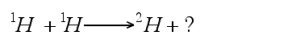
B alpha
C positron

$${}_{1}^{0}e^{+}$$

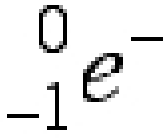
D electron

$${}_{-1}^{0}e^{-}$$

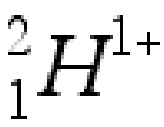
4 What is the other product in this nuclear reaction?



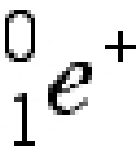
A electron



B deuteron



C positron



D alpha

5 U-238 undergoes alpha decay to yield one other product. What is that product?

A U-237
B Th-234
C Np-238
D None of the above.

6 Pu-240 is generated by the reaction of a deuterium atom (H-2) with another element; a beta particle is the other product. What is the reactant element?

A Np-237
B Pu-239
C Pa-235
D None of the above