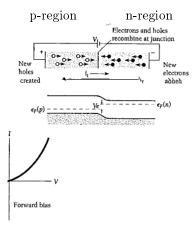
solutions for quiz: Mar12:

Gr I:

1.
$$^{235}_{92}\text{U}^{-\alpha} \xrightarrow{\text{particle}_{90}^{231}\text{Th}}$$

$$\underset{81}{\overset{208}{\text{Tl}}}\text{Tl}\overset{-\beta}{\overset{\text{particle}_{208}}{\overset{208}{\text{Pb}}}}\text{Pb}$$

2. Forward bias of a diode:



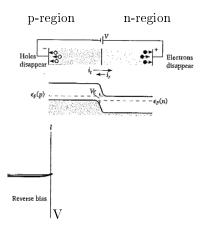
When an external voltage is applied so that the p end of the diode is positive, the recombination current can be uch larger than the thermal electron current to give a large net electron current to the left.

 $Gr\ II:$

1.
$$^{220}_{86}\mathrm{Rn}^{-\alpha} \xrightarrow{\mathrm{particle}_{216}}_{84}\mathrm{Po}$$

$$\mathop{\longrightarrow}^{228}\mathrm{Ra}^{-\beta}\mathop{\longrightarrow}^{\mathrm{particle}}_{90}^{228}\mathrm{Ac}$$

2. Reverse bias of a diode:



When an external voltage is applied so that the p end of the diode is negative, the recombination electron current is less than the thermal electron current. The result is a very small net electron current to the right.