

Section - A

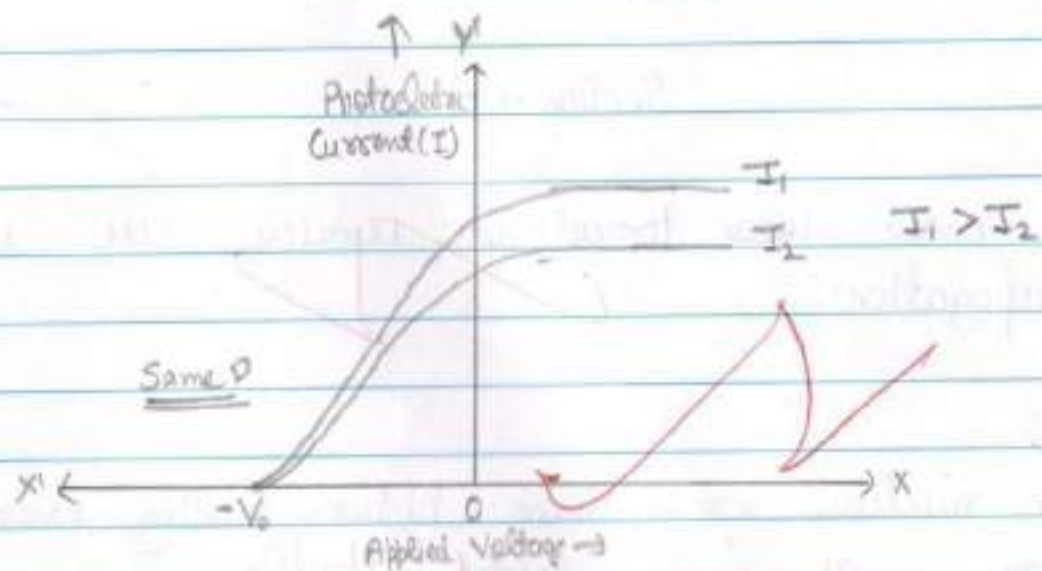
A-1. 1 Short wave ~~uses~~ broadcast services use sky wave propagation.

A-2. 1 Daughter nucleus would have higher binding energy per nucleon, as it is more stable.

A-3. 1 (a) UV Rays are used for water purification

(b) eye surgery requires high frequency waves like UV, X ray or γ rays.

A-4. 1 Photoelectric current increases as the intensity of incident radiation increases.



A-5 We know that frequency ν is given by

$$\nu = \frac{qB}{2\pi m}$$

for a proton and electron entering the field,

$q = e$, B is same for both

$$\Rightarrow \nu \propto \frac{1}{m}$$

i.e. frequency is inversely proportional to mass.