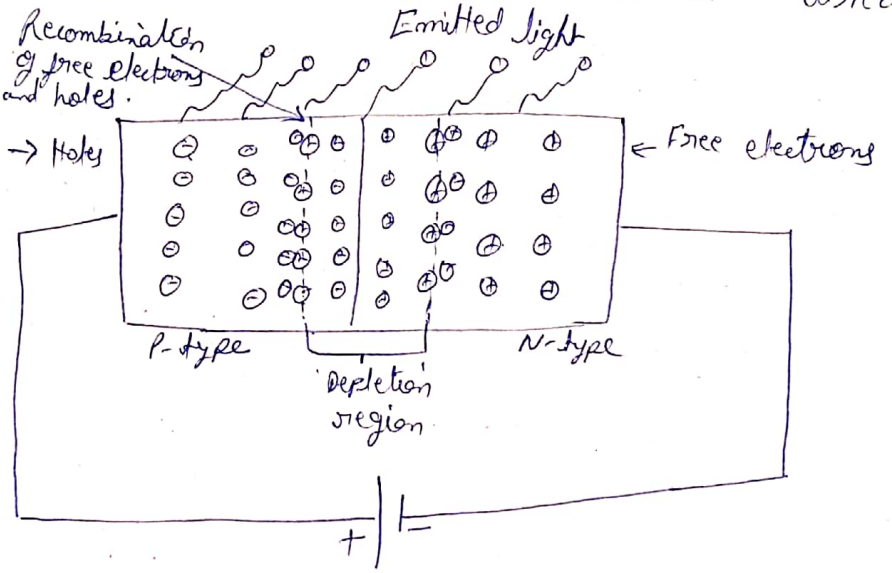
Question - 1 section - 3

Answer

Working principle of LED :—

Like an ordinary diode, the LED diode works when it is forward biased. In this case, the n-type semiconductor is heavily doped than the p-type forming the p-n junction. When it is forward biased, the potential barrier gets reduced and the electrons and holes combine at the depletion layer (or active layer), light or photons are emitted or radiated in all direction.



⇒ Quantum efficiency of LED :—

η = The internal quantum efficiency of a LED is the fraction of diode current that will produce luminescence. It is a function of the injection efficiency and a function of the Percentage or radiative recombination events compared with the total number of recombination events.

⇒ various Parameter of LED :—

(I) LED light intensity value, lv
(II) LED current / voltage specification
(III) LED Reverse voltage
(IV) LED angle of view specification
(V) LED specification for operational life.