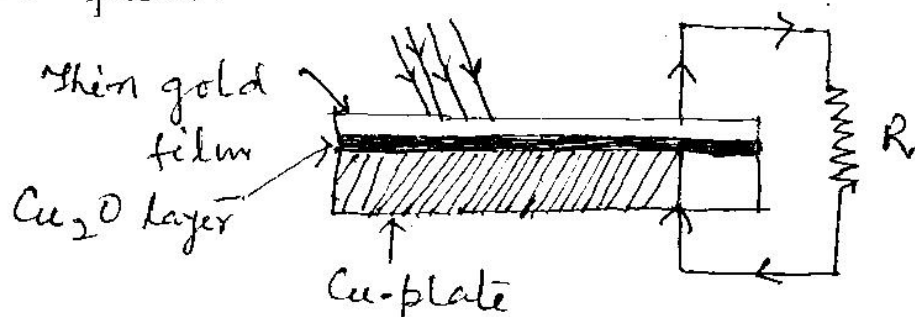


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D-2(S)

Photo voltaic Cell :- It differs from the photo emissive type in the important respect that no external battery is used to accelerate the emitted photo-electrons as the cell generates its own e.m.f. It generally consists of a copper plate on which is deposited a semi conducting layer of cuprous oxide (Cu_2O). A very thin film of gold or silver is sputtered on the upper exposed surface of oxide layer by means of evaporation in vacuum.

When light is made to fall on the cell, it penetrates the thickness of the film and ejects electrons from the boundary between the cuprous oxide and the layer of the gold film.



If the conducting path is provided through an external low resistance R , the current flows along the circuit. The strength of

the current and hence the fall of potential across the external resistance is proportional to the intensity of the light beam. The main advantages of this cell are that (i) no external source of e.m.f is required.
(ii) It is very sturdy and cheap.
