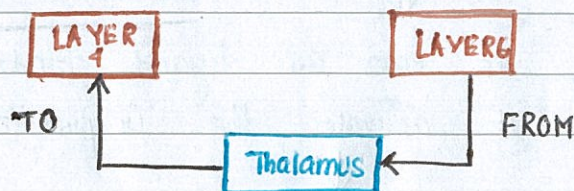


## Notes (Doubts wrt Circuit Diagram)

17th Oct

1. Generally the following is considered  $\rightarrow$  so this is the reason why layers 4 & 6 are only considered.



2.  $| - - - | \rightarrow$  'modulators' modify means for eg:-  
Interfering a person while he/she is doing work  $\Rightarrow$  then continues to do same work but may be from different location.

3. 'IN' is modulatory  $\rightarrow$  Here 'IN' is modulatory because for eg:- the signal sent by 'IN' is not the only one. TCR already has from retina. for eg:- OIP from such cases is modified; i.e., when we have high +ve and -ve signal then OIP signal is little suppressed due to -ve one.

4. 'TRN' is always modulatory.

5. 'Ionotropic and metabotropic':-

- Ionotropic receptors act very quickly.
- Ligands bind to them and they change shape and allow ions to flow in.

But the ligand doesn't stay in place very long and channel closes back very quickly.

- Ionotropic receptors allow different kinds of ions to travel in and out of the cell.

[NB:- Here, Ligand is a substance that forms a complex with a biomolecule to serve biological Purpose] an ion/ molecule attached to central atom forming



- Metabotropic receptors do not have a 'channel' that opens or closes → instead they are linked to another small chemical called a "G-protein"

↓

As soon as ligand binds the metabotropic receptor → it activates the G-protein

↓

once activated the G-protein itself goes on and activates another molecule ⇒ This new molecule is called a secondary messenger whose function is to go and activate other particles.

NB:- Metabotropic receptors do not have ion channels and binding of ligand may or maynot result in the opening of ion channels at different sites on the membrane; But they will always activate a g-protein that will in turn activate secondary messengers.

#### SIMPLIFIED CIRCUIT DIAGRAM:-

