

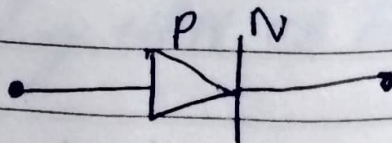
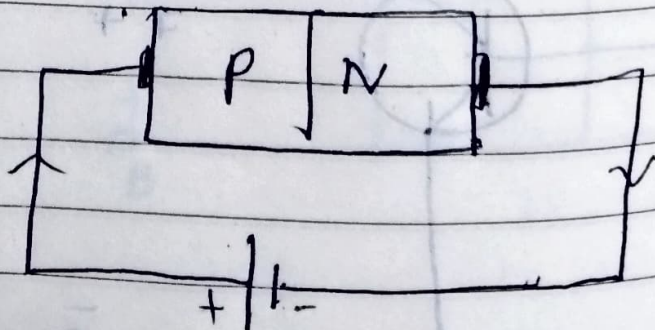
BJT \rightarrow Bipolar Junction Transistor

Junction transistors or simply ~~called~~ bipolar transistor (BJT) is a semiconductor device having two junction & three terminals. It is obtained by growing a thin layer of one type of semiconductor in between two thick layers of other similar type of semiconductors.

Types of junction Transistors

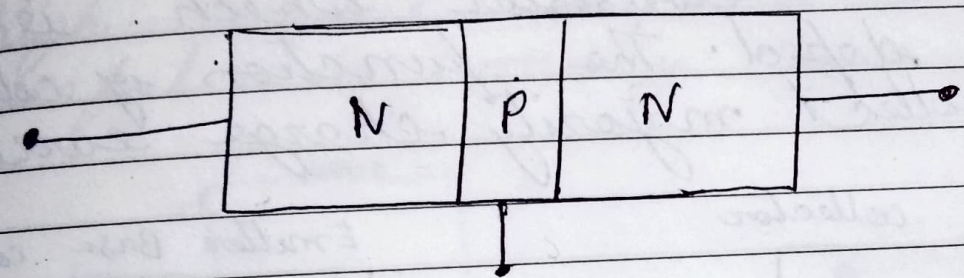
(1) N-P-N Transistor

(2) P-N-P Transistor



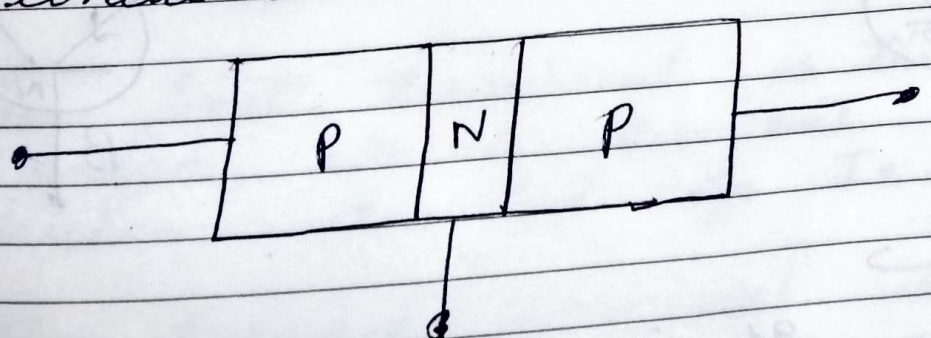
① N-P-N Transistors →

is obtained by growing a thin layer of P-type semiconductor in ^{between} two relatively thick layers of n type semiconductor



② P-N-P Transistors →

A P-N-P transistor is obtained by growing a thin layer of N type semiconductor in between two relatively thick layers of P-type semiconductor



Main components of Transistor →

(1) Emitter →

It is left hand side thick layer of moderately size of the transistor which is heavily doped. The function

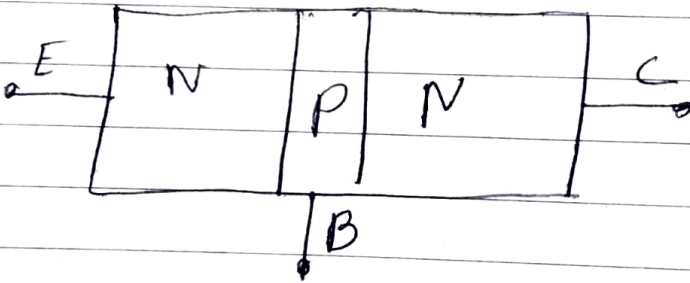
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9 of emitter is to emit majority charge carriers.

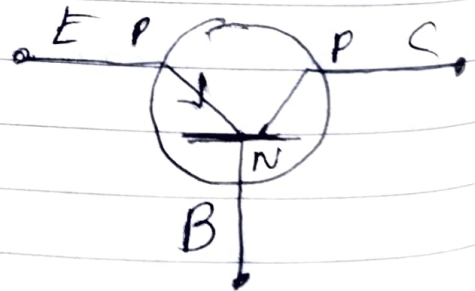
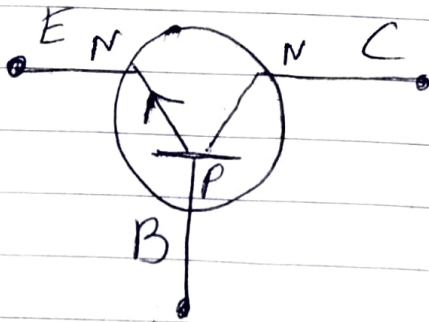
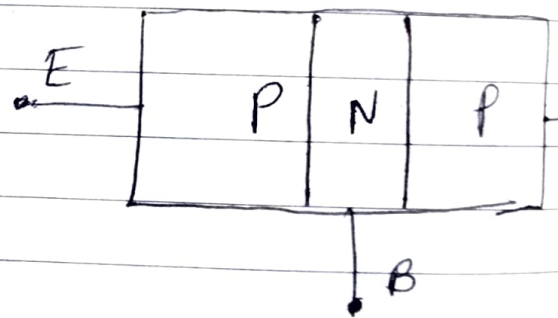
10 (2) collector →

11 It is right hand side
12 thick layer of large size than that of
13 emitter of the transistor which is
moderately doped. The function of collector
is to collect majority charge carriers

Emitter Base collector



Emitter Base collector



20 (3) Base →

Sunday 28 It is the central thin layer of transistor which is lightly doped. Base provides the proper interaction between the emitter and collector.