



SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution)



COIMBATORE-35

**Accredited by NBA-AICTE and Accredited by NAAC – UGC with A+ Grade
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai**

DEPARTMENT OF BIOMEDICAL ENGINEERING

COURSE NAME: 19EIB201/ ELECTRONIC DEVICES

II YEAR / III SEMESTER

Unit 3– Small Signal Amplifier

Topic 2: Transistor as Amplifier

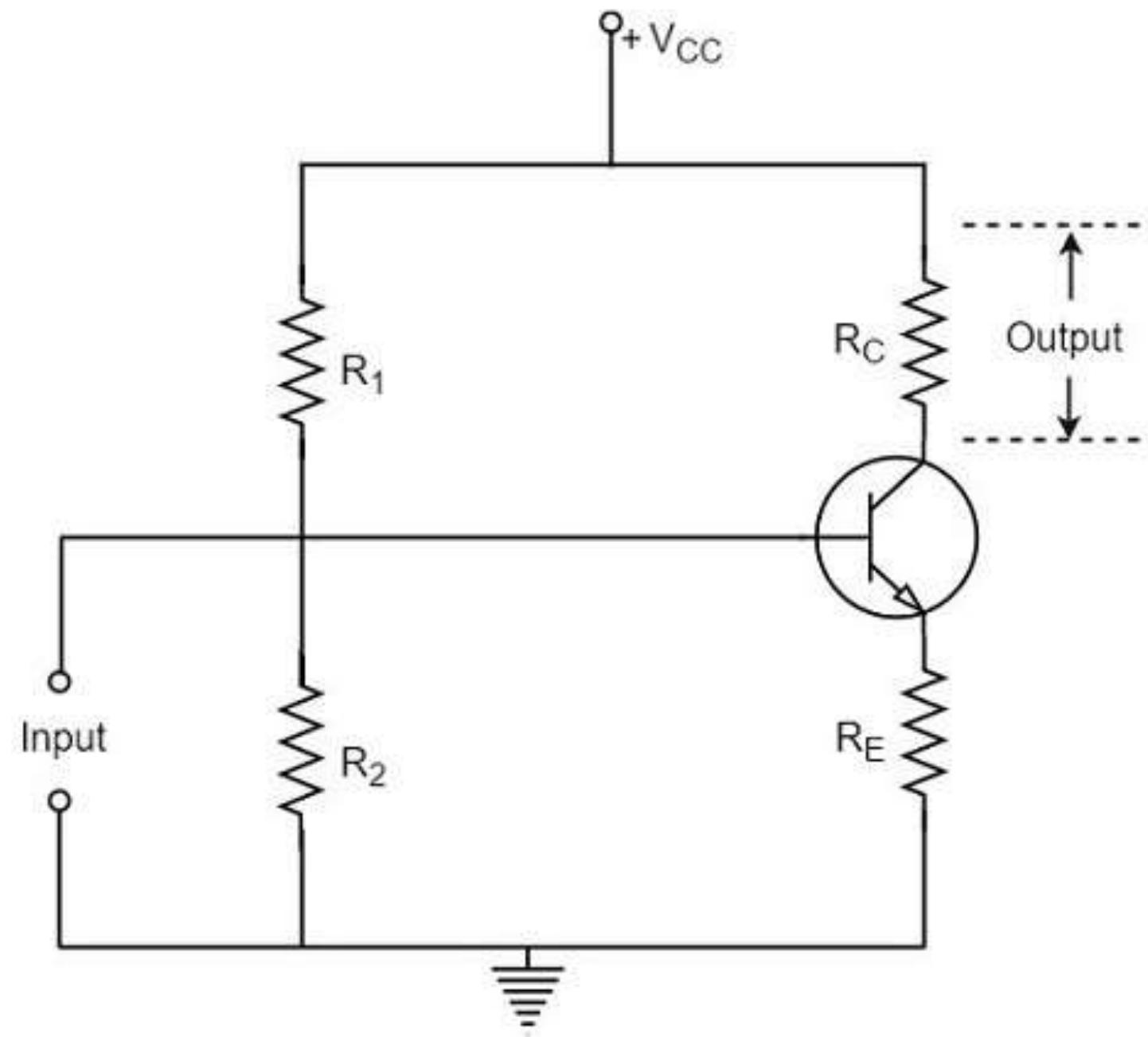




Single-stage Transistor Amplifier

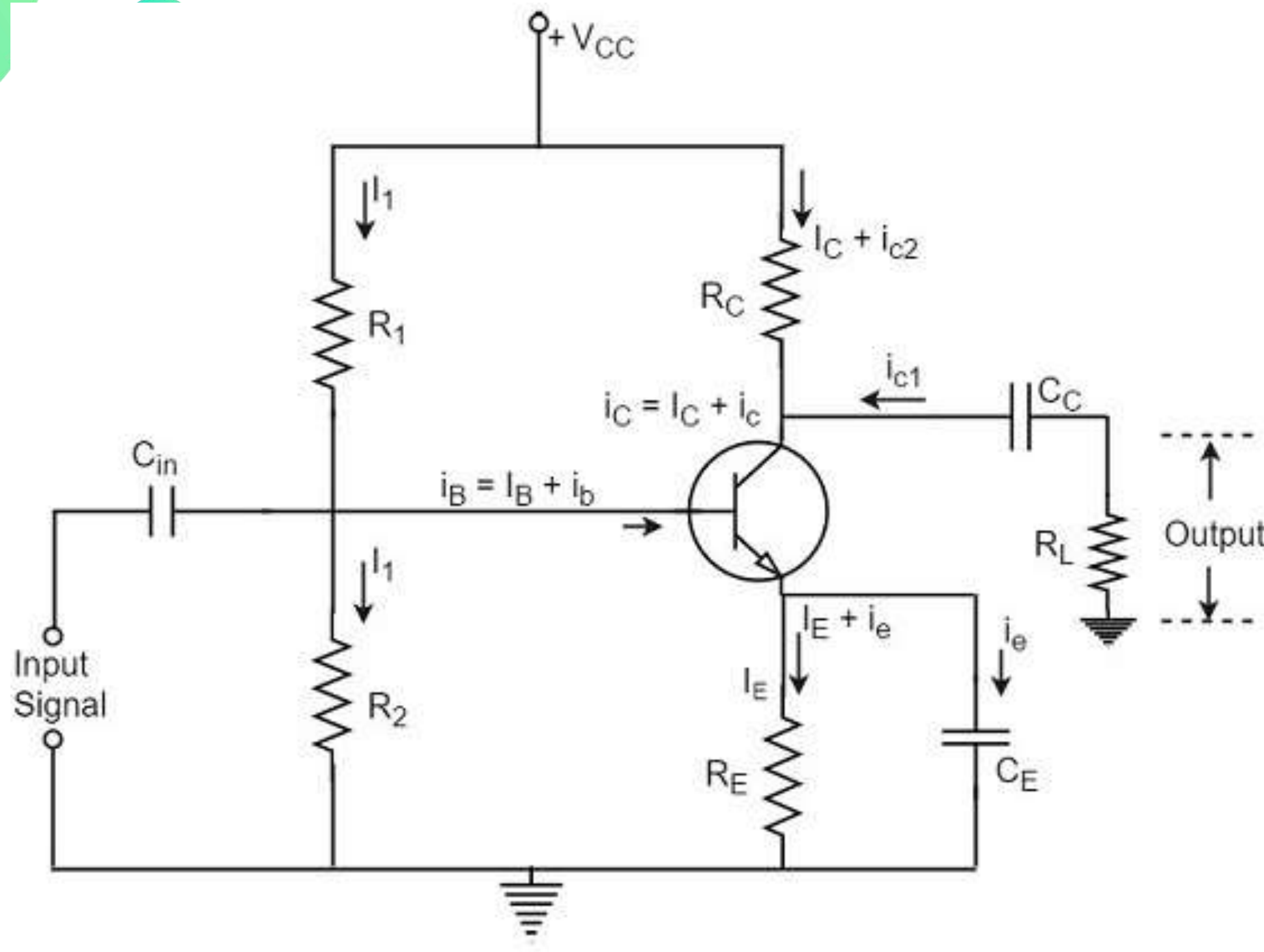


- When only one transistor with associated circuitry is used for amplifying a weak signal, the circuit is known as single-stage amplifier.





Practical Circuit of a Transistor Amplifier



Biassing Circuit

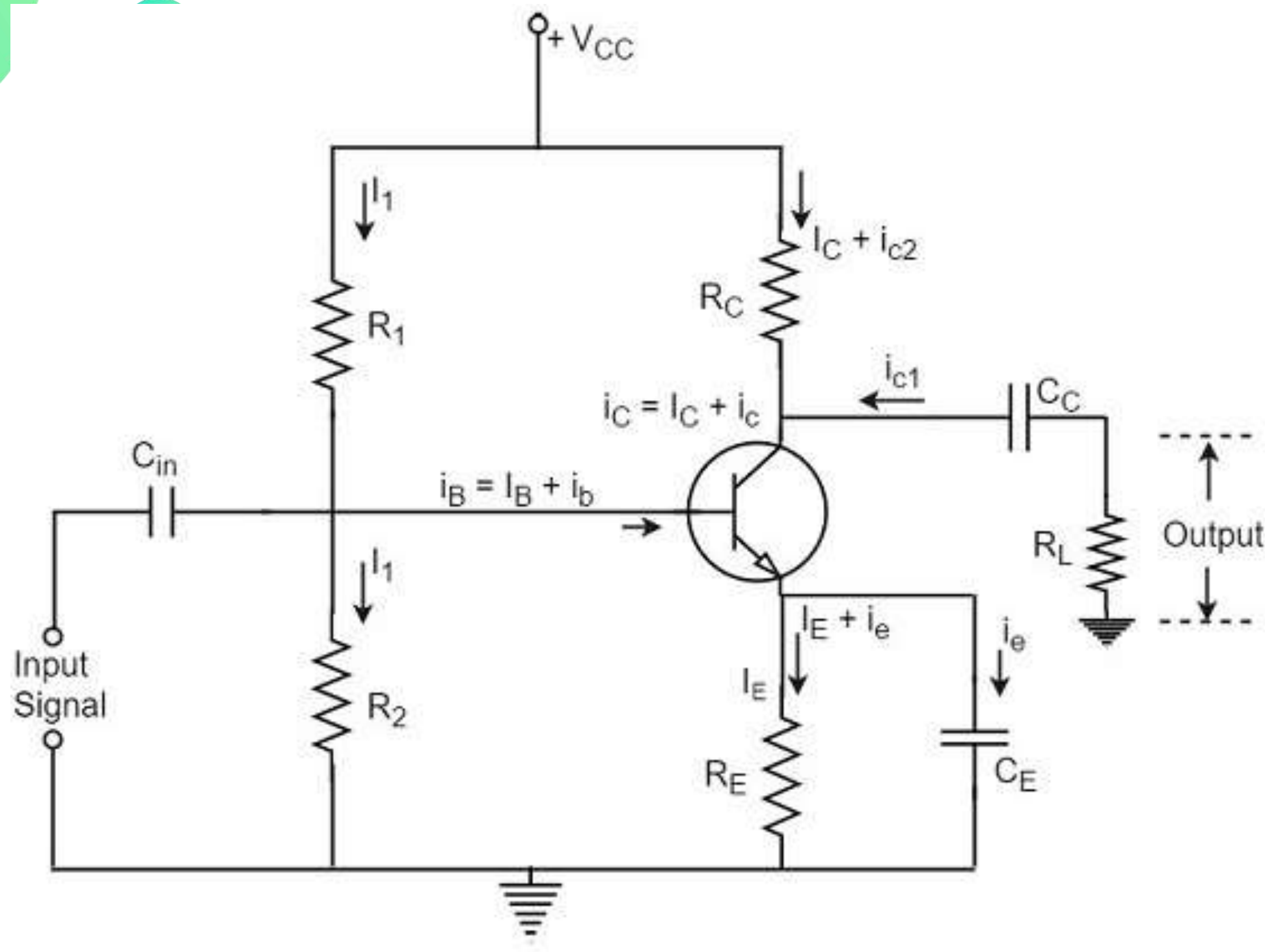
The resistors R_1 , R_2 and R_E form the biasing and stabilization circuit, which helps in establishing a proper operating point.

Input Capacitor C_{in}

This capacitor couples the input signal to the base of the transistor. The input capacitor C_{in} allows AC signal, but isolates the signal source from R_2 . If this capacitor is not present, the input signal gets directly applied, which changes the bias at R_2 .



Practical Circuit of a Transistor Amplifier



Coupling Capacitor CC

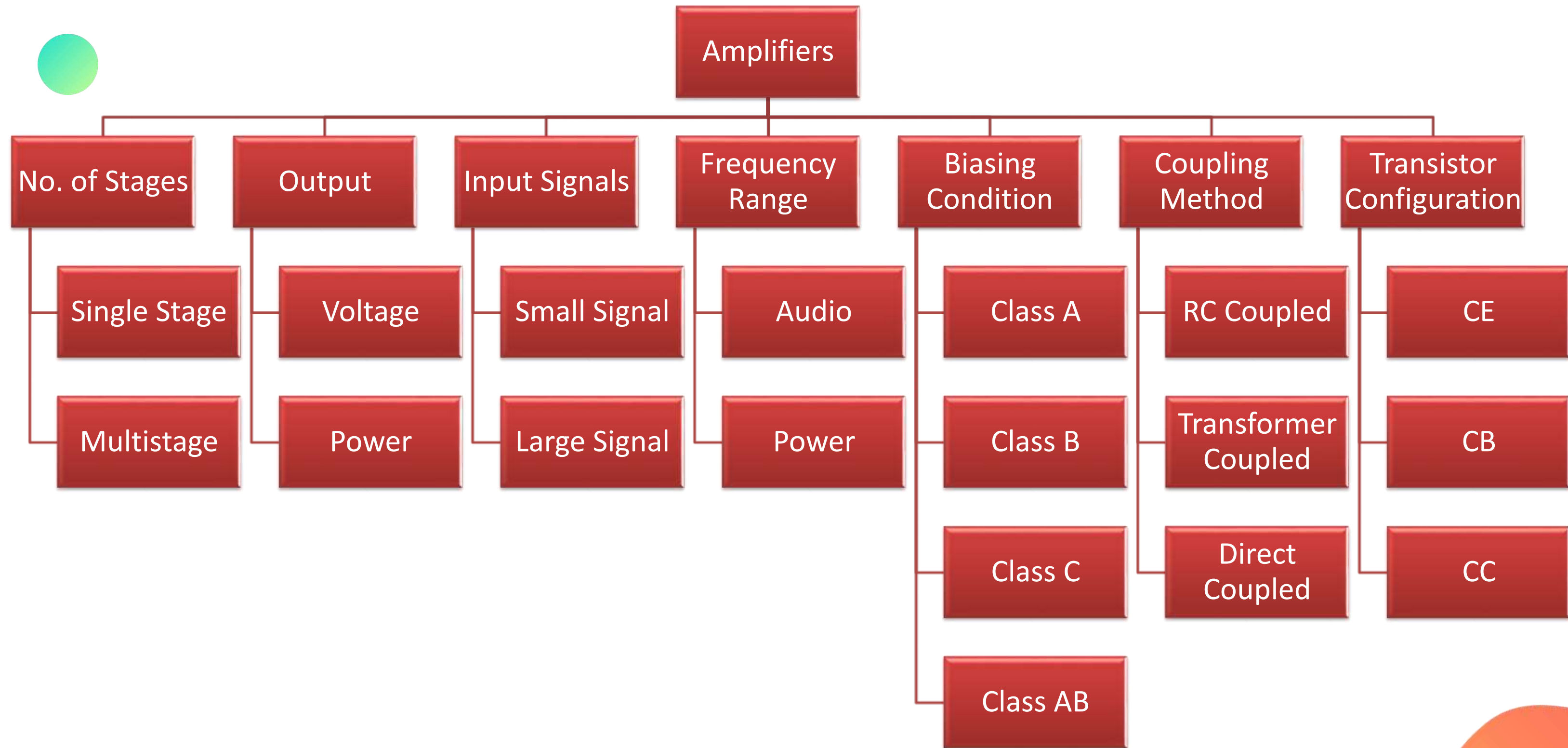
This capacitor is present at the end of one stage and connects it to the other stage. This capacitor blocks DC of one stage to enter the other but allows AC to pass. Hence it is also called as blocking capacitor.

Emitter by-pass capacitor CE

This capacitor is employed in parallel to the emitter resistor R_E . If this is not present, that signal will pass through R_E which produces a voltage drop across R_E that will feedback the input signal



Classification of Transistors Amplifiers





SUMMARY



ASSESSMENT

Dear student,

Quiz is posted in your Google class room

Allotted time for quiz is 5 min

No of Questions is 10





KEEP
LEARNING..
Thank u

SEE YOU IN NEXT CLASS