# Lab 03

# Bipolar Junction Transistor (BJT) Characteristics

|  |  |
| --- | --- |
| **Name: basil khowaja**  **Aamaina mukaram** | **Student ID: bk08432**  **at08391** |

## Objective

To investigate the characteristics of Bipolar Junction Transistor and its input and output characteristic curves in Common Emitter configuration with load line

## Pre-Lab Task

## Task 1: To draw the symbol of BJT and label its terminals and junctions

Name the three terminals and two junctions of BJT. Compare the terminals with respect to doping and thickness. Draw the symbols of *pnp* and *npn* BJTs with their terminals labeled and complete Table 3.1.

Table 3.1: BJT terminals and representation

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Terminals of BJT | | Doping | | Thickness |
| 1 | base | Lightly doped | | Least thick |
| 2 | collector | Moderately doped | | Most thick |
| 3 | emitter | Heavily doped | | Moderately thick |
| Junction 1 | | PNP junction | | |
| Junction 2 | | NPN junction | | |
| Symbolic Representation | | | | |
|  | | |  | |
| *npn* BJT | | | *pnp* BJT | |