Analog Electronic Circuits (UEC301)
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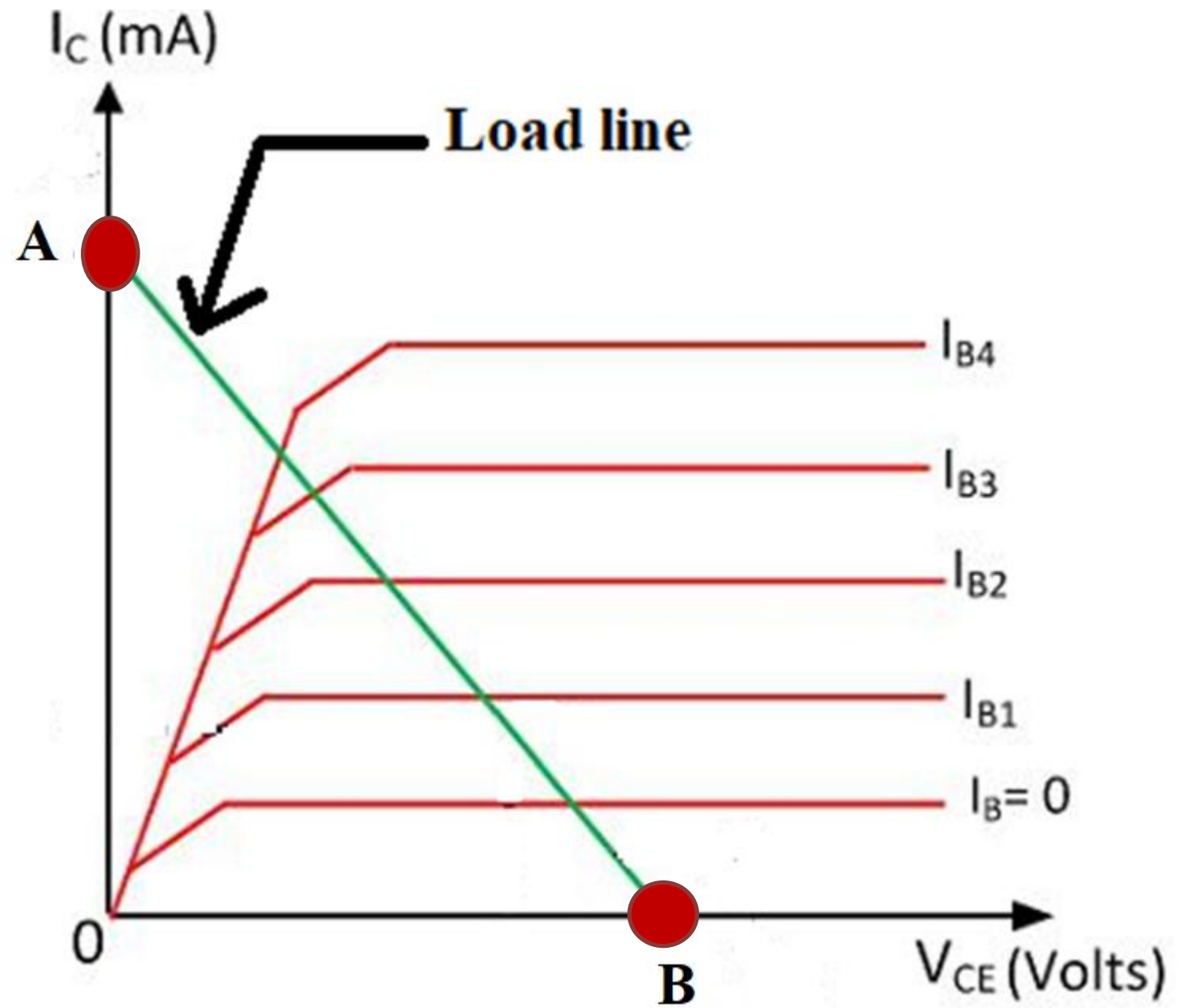
Subject: Analog Electronic Circuits (UEC301)
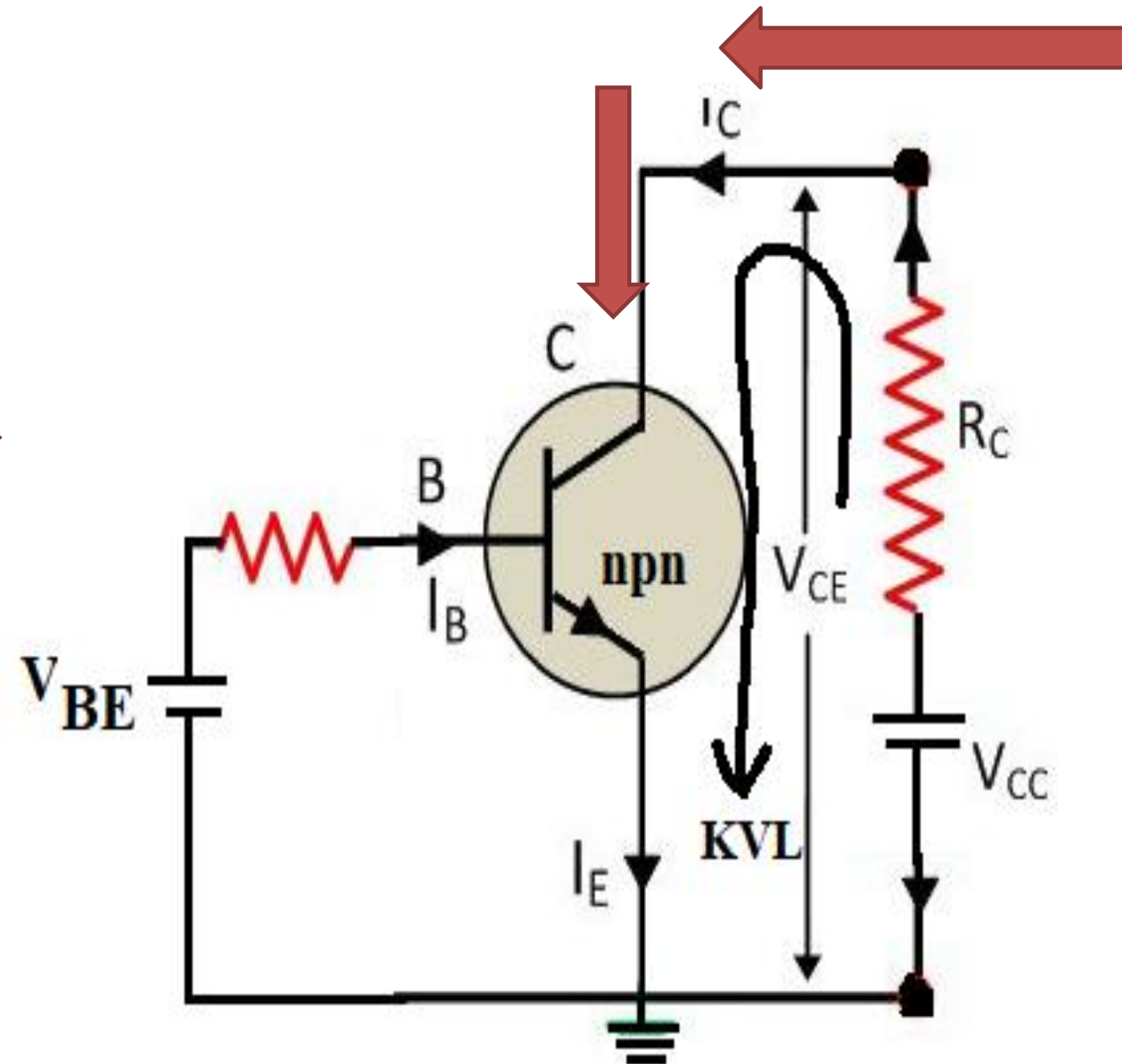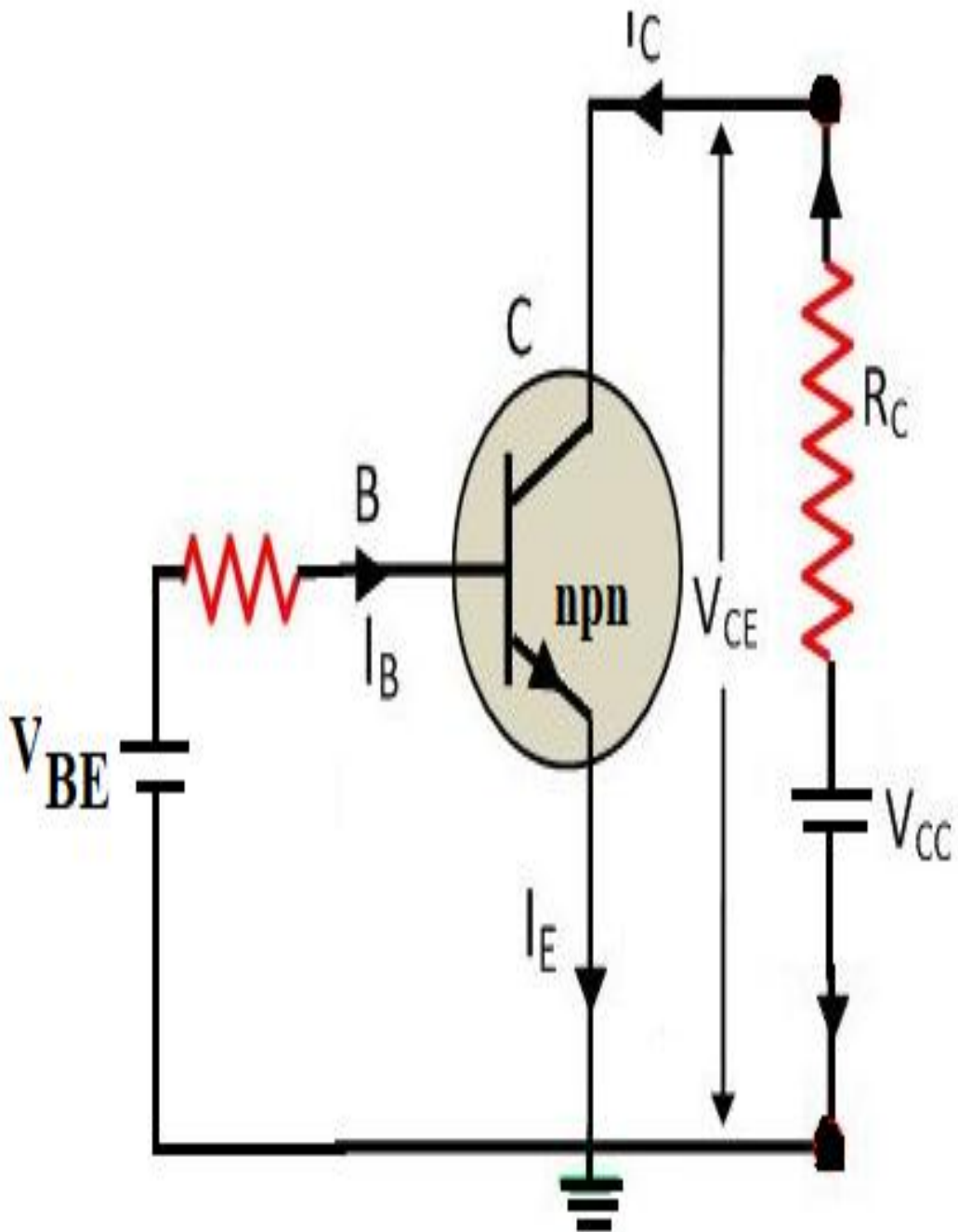
Lecture topic : Load Line analysis

Key points

- **Load Line**

- **Three different points**

  - ❖ **Cut-off point**
  - ❖ **Saturation point**
  - ❖ **Operating point**

- **Three different Regions**

  ❖ **Saturation Region**

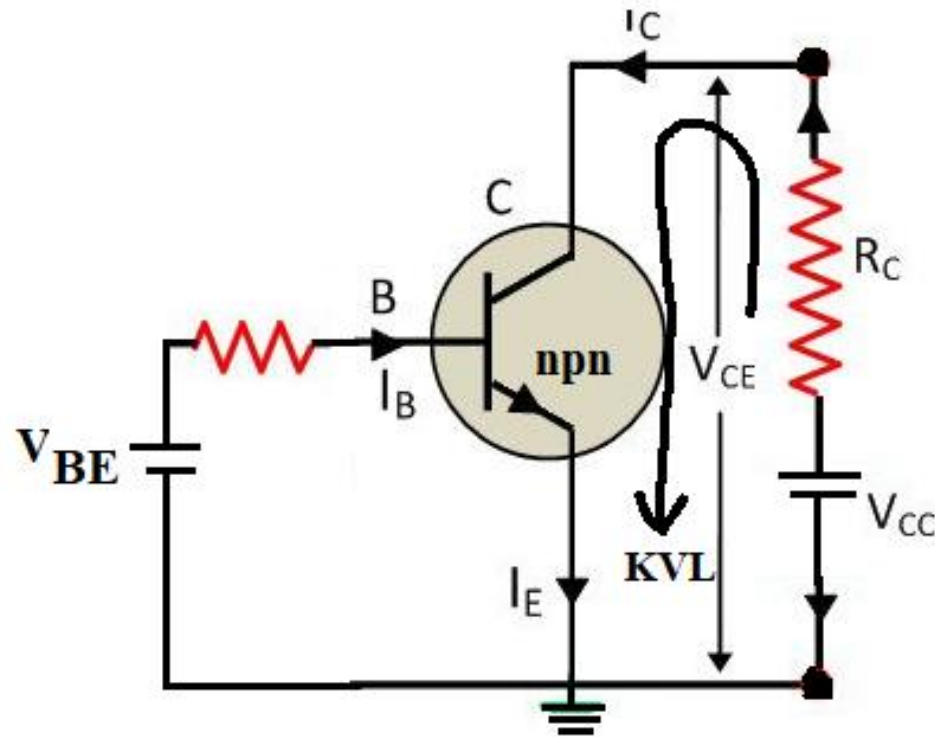 ❖ **Active Region**

  ❖ **Cut-off Region**

Load Line

Cont..

Cont..

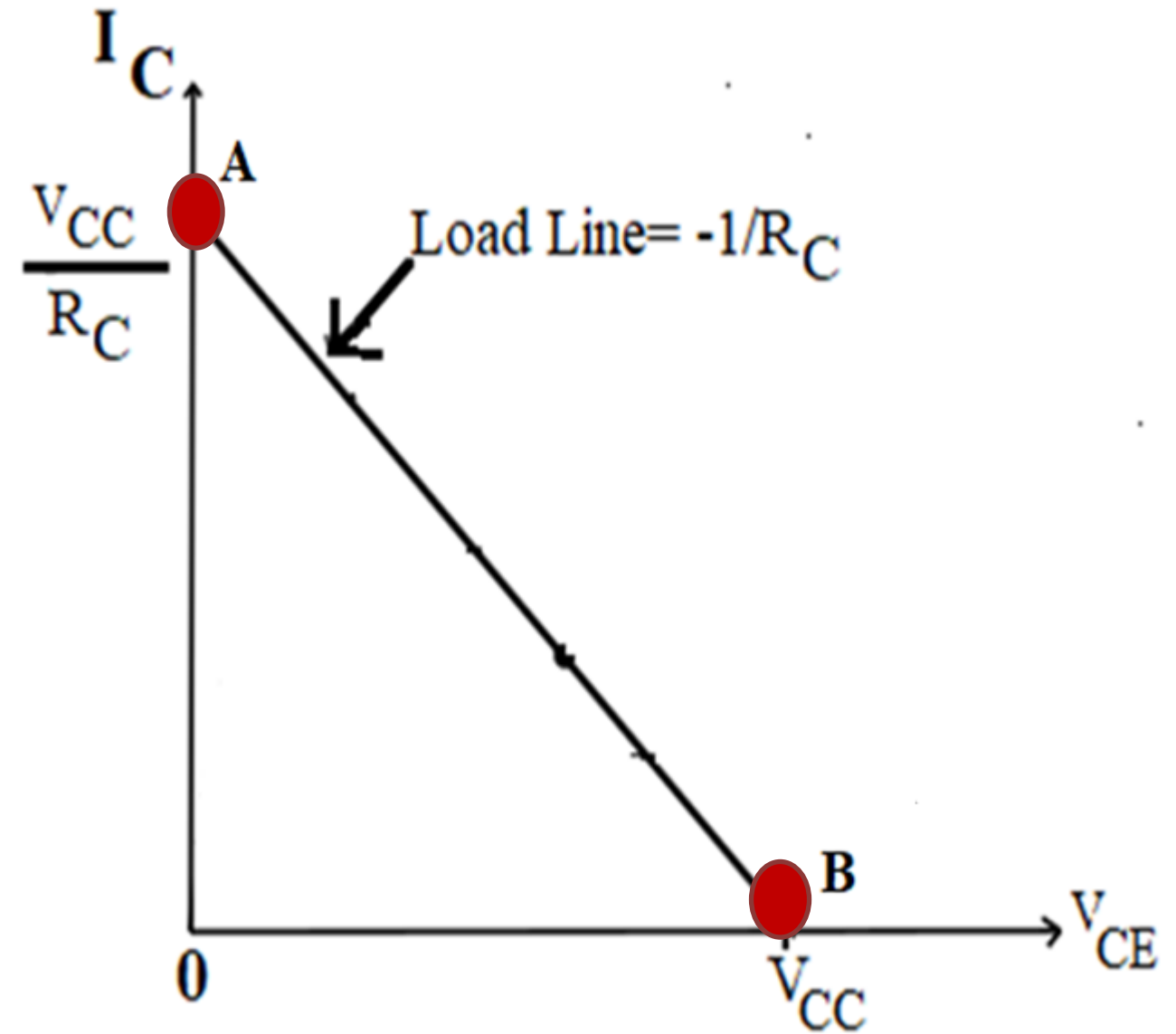$$V_{CC} = V_{CE} + I_C R_C \quad (1)$$

The end point of the line are located as

1. V_{CE} is maximum when $I_C = 0$ then from the equation (1)
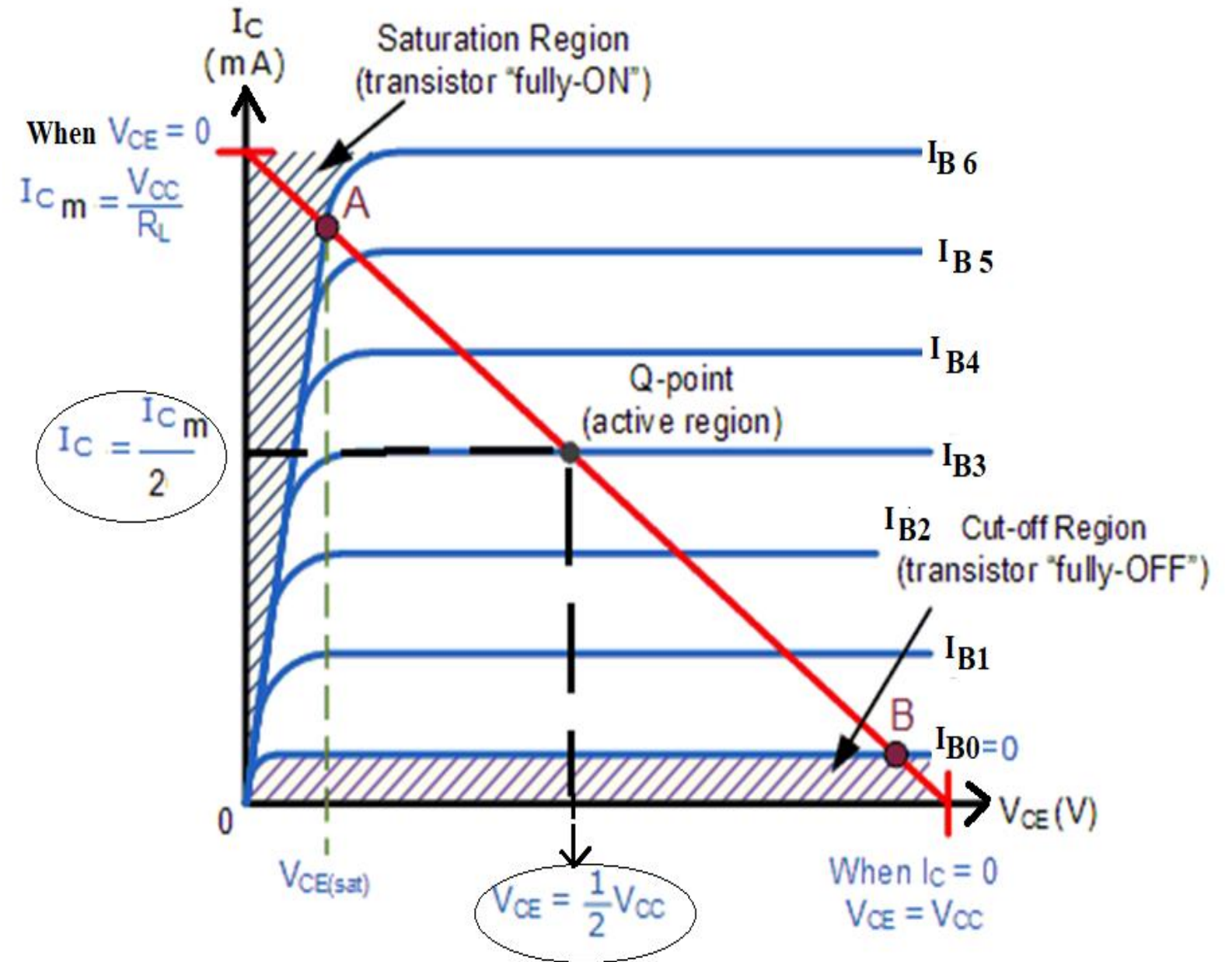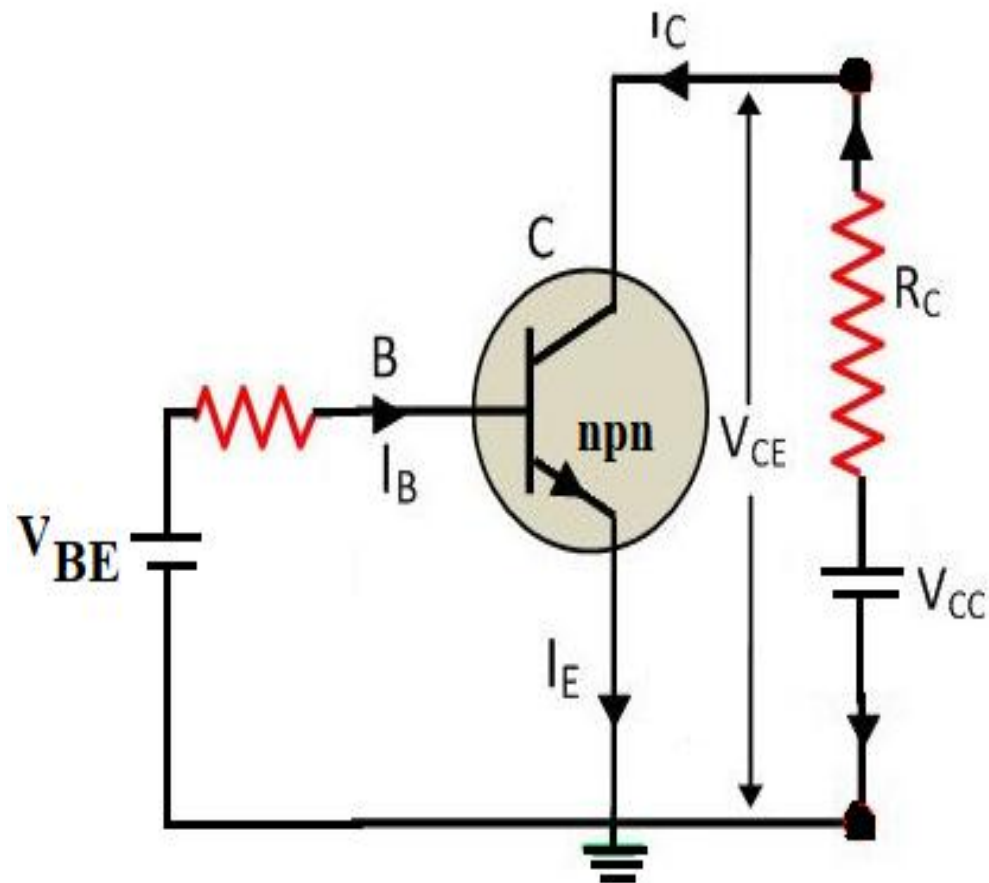
$$V_{CE} = V_{CC}$$

2. I_C becomes maximum when $V_{CE} = 0$ then from the equation (1)
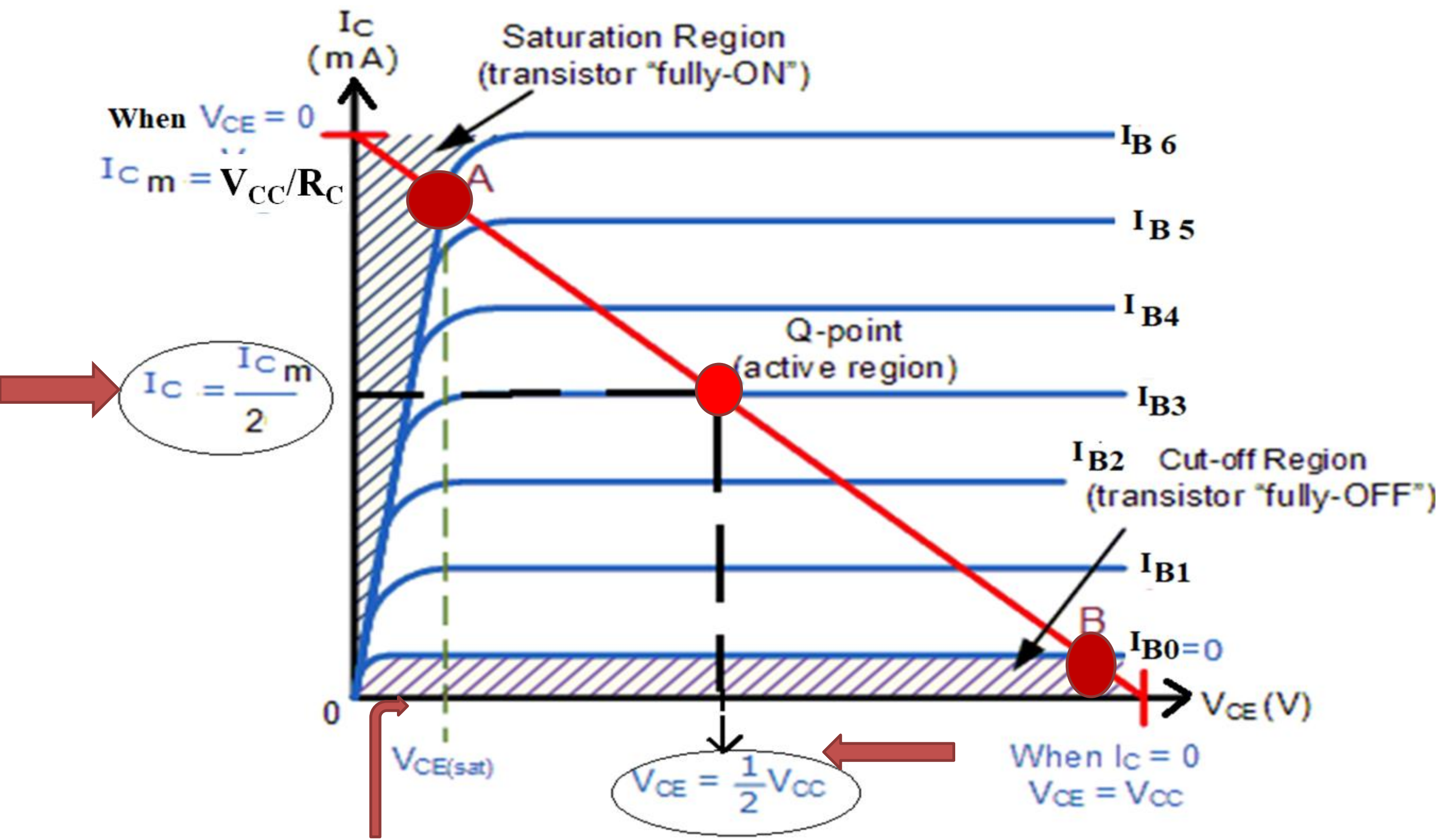
$$I_C = V_{CC}/R_C$$

Different points and Regions

- Saturation
- Active
- Cut-off

Saturation, Active and Cut-off Regions

Thank You