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Course: EEE111L

Section: 7

Quiz - 2

Answer to the Question No - 1

i) The left curve is the Input Characteristics Graph of a BJT and the right curve is the Output Characteristics Graph of a BJT.

ii) The name of the variables are:

a $\rightarrow I_b$

b $\rightarrow V_{ce}$

x \rightarrow Active region

y \rightarrow Saturation region

z \rightarrow Cutoff region

iii) The functions of a BJT are it can be used as an amplifier in the active region. And it can be used as a switch using the saturation and cutoff region.

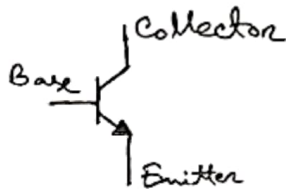
Answer to the Question No-2

a) Biasing a BJT circuit means applying DC voltage in a transistor so that it starts operating.

b) The names of the circuits are:

The left one is Voltage Divider Circuit and the right one is Fixed-Bias Circuit.

c) Symbol of a Transistor:



d) During the Lab experiment the Voltage Divider circuit showed better stability.

e) Two differences between BJT and MOSFET are:

i) BJT is a current controlled device on the other hand a MOSFET is a voltage controlled device.

ii) Current gain, β has effect on BJT but it doesn't affect MOSFET.

Answer to the Question No-3

The name of the given equipment is Oscilloscope.

The function of A, D, E are:

A is Cursor

D is Volt/Div, it's used to stretch the curve vertically.

E is Sec/Div, it's used to stretch the curve horizontally.

Answer to the Question No-4

The name of the graph is Output Characteristics Curve of MOSFET.

In the saturation region the MOSFET gives constant current output.

In the Ohmic region the current I_{DS} increases with V_{DS} .

In the cut-off region the MOSFET is off and so it doesn't operate so there's no current flow.

Answer to the Question No-5

a) True

b) True

c) i) forward

ii) Zener

