

EE232Exp. #2

Diode Characteristics

Report #2

 **COURSE LECTURER:**

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Prepared by

Name:

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***CAUTIONARY REMARK: All questions will be answered in the assigned blanks. Don’t use extra place for the answers due to the fact that they are not guaranteed to be evaluated.***

**Part 1--Introduction:** Explain the main objective of the first experiment on your own words. (10pt)

**Part 2--Procedure: a) Conventional Diode Basics:** Describe $R\_{DC}$ and $r\_{AC}$ of conventional diode in mathematical expression. Comment on the meaning of those. (10pt)

**b)** Solve the following circuit using linear diode model. Take as $ r\_{d}=30Ω$ , $V\_{on}=0.7V, R\_{1}=1k and V\_{S1}=8V$ (10pt)

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**c)** Plot $V\_{R}$ versus $V\_{D} $and $V\_{D}$ versus $I\_{D}$ using your measurements during the lab by considering the following circuit. (20pt)



**d)** Solve the following circuit using zener diode equivalent model. Take as $ r\_{z}=15Ω$ , $V\_{Z}=6V, R\_{1}=1M and V\_{S1}=-8V$ (10pt)



**e)** Plot forward and reverse bias results together using your measurements during the lab by considering the following circuit. (20pt)

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**Part-3--Conclusion:** Conclude your report with your learning from this experiment on your own words. Moreover, you can discuss or criticize some over-expected or under-expected sides of the experiment. (10pt)

**Part-4--References:** If you have referred parts, specify their references below. (10pt)