

Answer all Questions to total worth 15 marks

1. Explain how intrinsic semiconductor works.

3

Ans:

2. Explain the difference between extrinsic and intrinsic semiconductor.

3

Ans:

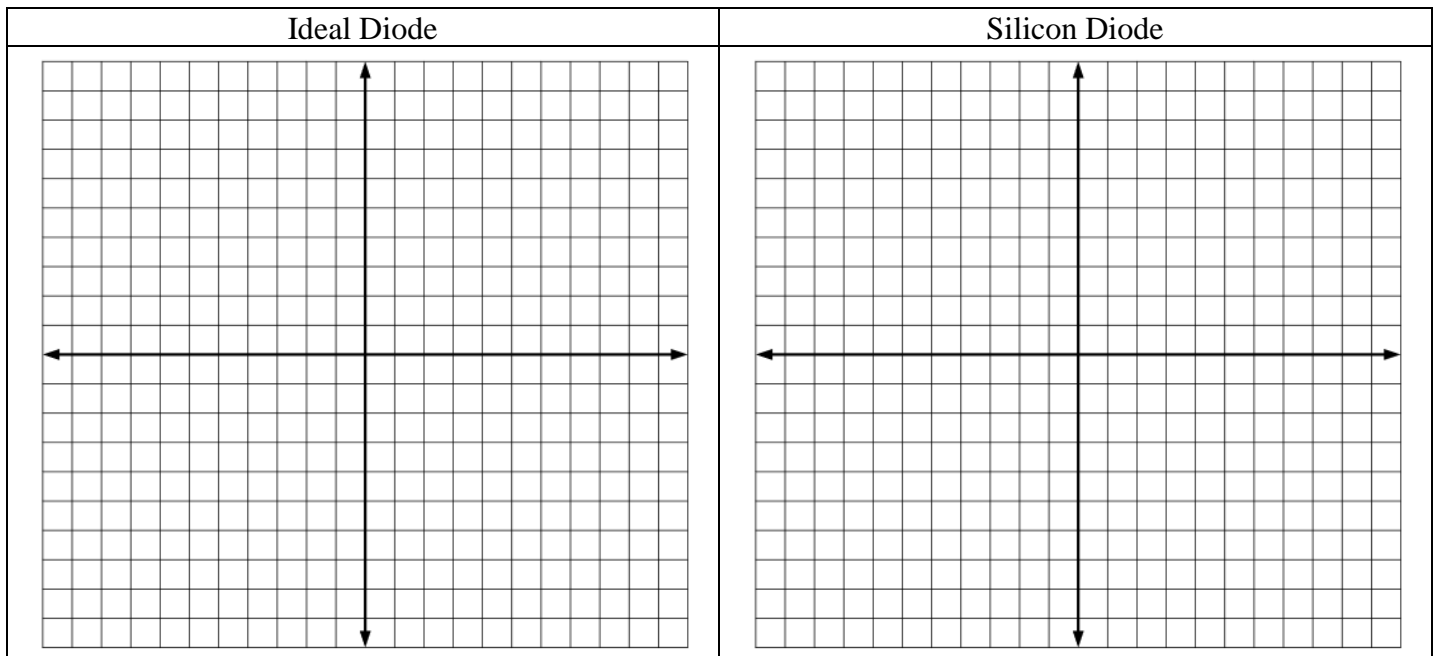
3. Explain what happens to the depletion region of a PN junction when
 a. Forward Bias is applied
 b. Reverse Bias is applied

4

Ans:

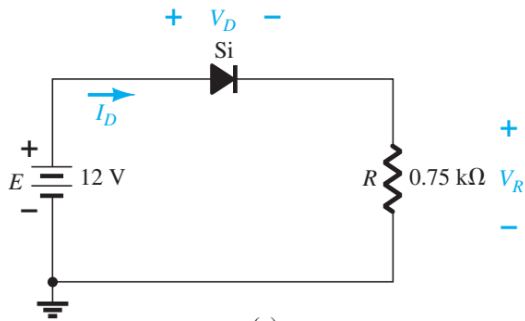
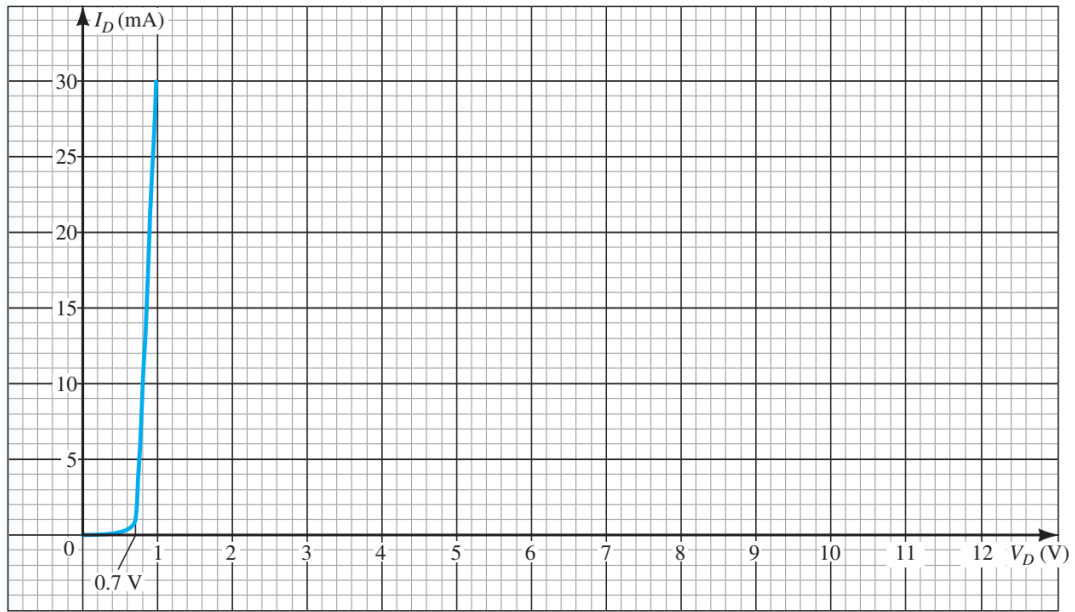
4. Draw the IV characteristics of
 a. Ideal Diode
 b. Silicon Diode

4



5. Using the characteristics below, determine I_D , V_D , and V_R for the circuit below.

4



6. Repeat question 5 with approximate model of diode

2