

Course No: EQUP 2208
 Course Title: Electronics 1
 Date: 11/03/2019
 No. of Questions: ()
 Time: 1 hour
 Using Calculator (yes)



First Mid. Exam For Second
 Semester.
 2018/2019
 Total Grade: (15)

Instructor Name: m.abualsebah
 Student No.: _____
 Student Name: _____
 College Name: _____
 Dep. / Specialist: _____
 Using Dictionary (No)

Question 1: (6 Marks)

A) Write True (T) or False (F):

1.	2.	3.	4.	5.

1. A semiconductor material that has been subjected to the doping process is called an extrinsic material.
2. Depletion region the ability to change the characteristics of the material.
3. The reverse breakdown voltage rating of the diode must be equal to the peak reverse-biasing AC voltage.
4. The diode in a parallel clipper circuit cuts any voltage that reversed biases it.
5. Zener diode used as overvoltage protection and voltage regulator.
6. Voltage multiplier circuits use a combination of diodes and capacitors to step down the output voltage of rectifier circuits.

B) For each of the circuits below, find the output.

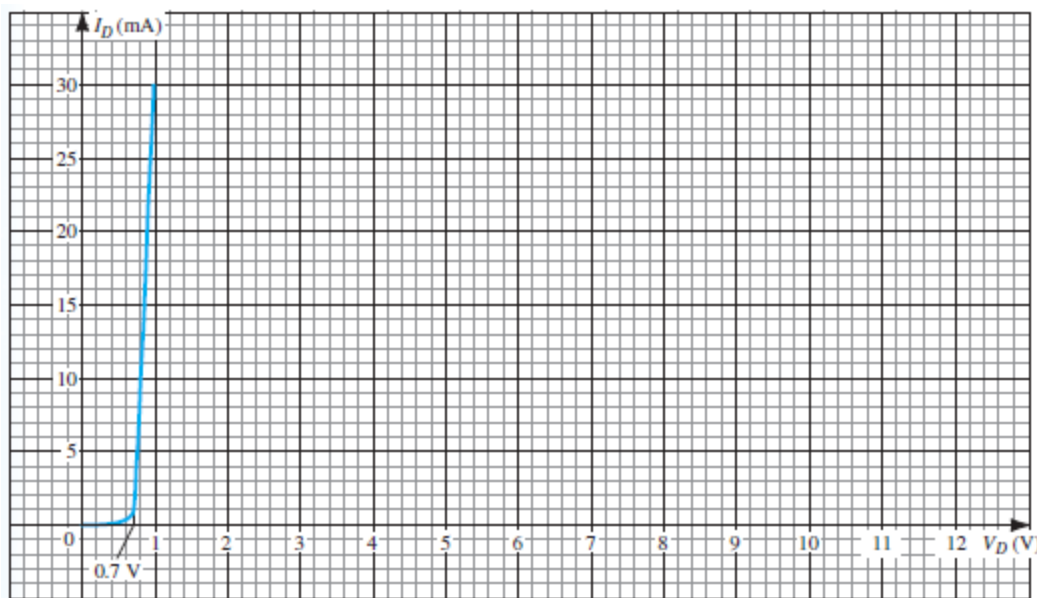
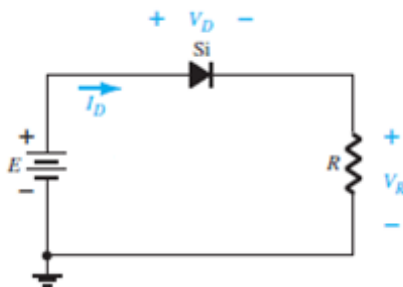
No.	Input	Circuit	Output
1.			
2.			
3.			



Question 2:

(4 Marks)

A) Determine the value of the resistance for the circuit that will result in a diode current of 17 mA if $E=8.1$ V.



B) Given a diode current of 8.15 mA, at temperature ($T=29.8^\circ$), $n=1$, and $I_s=4$ nA, find the applied voltage V_D . ($K=1.38 \cdot 10^{-23}$ J/K), ($q=1.6 \cdot 10^{-19}$ C)

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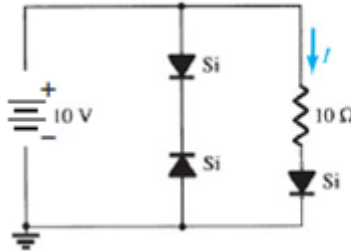
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Question 3:

(5 Marks)

A) For the circuit below, find the current I .



B) Design a power supply with input voltage 230 VAC, by using (19:1) step-down transformer passing through a full wave rectifier to get an output of 6 VDC.

Note / write the name of each component used in the circuit“

End of Questions
 Good Luck

University of Palestine



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