SEMICONDUCTOR DEVICES

Test Paper-II

MAX MARKS: 30 **TIME: 90Mts**

Sl. No.	QUESTION	ANSWER PAGE	MARKS
1	What is a semiconductor diode? Give the symbol representing the same.	Page:478	1
2	Discuss about the forward bias condition of a p-n junction diode. Also draw its characteristic curve.	Page:479	3
3	Discuss about the reverse bias condition of a p-n junction diode. Also draw its characteristic curve.	Page:480	3
4	Explain the working of a semiconductor diode as a Half- wave rectifier. Give the input and output waveforms.	Page:483	3
5	Explain the working of a diode as a Full wave rectifier and give its input output waveforms.	Page:484	3
6	What is a zener Diode? Explain the working of a zener diode as a voltage regulator.	Page:485	3
7	In a zener regulated power supply a zener diode with Vz=6.0V is used for regulation. The load current is to be 4.0mA and the unregulated input is 10.0V. What should be the value of series resistors?	Page:486	3
8	What is a photodiode? Explain the working of it.	Page:487	3
9	The current in the forward bias (mA) is known to be more than the current in the reverse bias (μA). What is the reason then to operate the photodiode in reverse bias?	Page:487	3
10	What is an LED? Briefly explain the working of it. What are its advantages over incandescent low power lamps?	Page:488	3
11	Match the following	Page:486 to 489	

Group-A	Group-B	MARKS
1. LED	a. When illuminated with light electron –hole Pairs are generated	2
2. Photodiode	b. convert electrical energy into light	
3. Solar cell	c. voltage regulator	
4. Zener diode	d.genrates emf when light falls on it.	