4. When a diode is ON, it behaves as *
(2 Points)

- A pure resistance.
- An excellent pure conductor.
- An ideal current source.
- A pure capacitance.
- None of the above or belov

None of the above or below.

5. A zener diode in a circuit is used in the forward biased mode. * (2 Points)

- Such kind of biasing is not possible.
- Can be done but not justifi
- No point as it will act as a short circuit.Option 3
- none of the above or below.
- No point as it will act as an open circuit.

6. A current-voltage relationship of a particular diode is given by iD = 0.05 *vD - 0.0335.

7. Given the graph shown. The diode forward bias resistance at 3.5mA is about (see ee261stMidtermGraphs in files) *
(2 Points)

- 0.116Ω
- 11.6Ω
- 0.8Ω
- 8.57Ω
- 85.7Ω

8. refer to the graph, when 2mA passes through the diode , the power dissipated in the diode is *
(2 Points)

9. Find I_D ,and V_o in the circuit shown given V_γ=0.7V,rf=0Ω. (see ee261stMidtermGraphs in files) *
(2 Points)

- I_D=465μA ,and V_o=4.3V
- I_D=0A ,and V_o=5V
- I_D=465μA ,and V_O=-4.3V
- I_D=0A ,and V_o=-5
- I_D=0A ,and V_o=0V

10. Consider the circuit shown where I_D=0.4mA , and the diode turn-on voltage is 0.7V. Calculate the diode forward resistance r_f
(see ee261stMidtermGraphs in files) *
(2 Points)

- 6.5 Ω
- 1.75 Ω
- 50
- 0 Ω
- 012.5 Ω

11. Consider the circuit shown where $V_\gamma=0.7V$,and $r_f=0\Omega$. The supply voltage is -2V. The current in the resistance is.
(see ee261stMidtermGraphs in files) *
(2 Points)

- 1.625mA
- -8.75mA
- 8.75mA
- -13.375m
- The diode is OFF, Current is zero.

12. Consider the circuit shown where V_Z=6.8V ,r_Z=0Ω. Calculate the Zener current. (see ee261stMidtermGraphs in files) *
(2 Points)

- 3.4mA
- 6.8mA
- 3m[redacted]
- None of the above or below.
- With circuit values, the diode blows up

8. refer to the graph, when 2mA passes through the diode , the power dissipated in the diode is *

(2 Points)

- About 1.35mW
- About 2.45mW
- About 2.42mW, i.e. delivering power.
- About 2.4mW
- About -1.35mW, i.e. delivering power.

9. Find I_D ,and V_o in the circuit shown given V_γ=0.7V,rf=0Ω.

3. A generic diode with breakdawn voltage of 100V can be used as * (2 Points)

- ○ An amplifier of low gain 15/0.7
- ○ A 15V rectifi
- ○ An amplifier of gain 100/15.
- ○ None of the above, or below.
- ○ All of the above, or below.

4. When a diode is ON, it behaves as *

2. A motion detection circuit using diodes may involve. *
(2 Points)

- A forward biased infra-red diode together with a reverse biased infra-red photo diode.
- An infra-red LED diode together with a photo diode both reverse biased.
- Two zener diodes.
- Two Shottky diodes because they are fast.
- A zener diode for voltage regulation and and a fast diode for detection.

3. A generic diode with breakdawn voltage of 100V can be used as *

11.7

15. Consider the circuit shown where both diodes are assumed ON. Given that
R_1=10 KΩ,R_2=30KΩ,
Vγ =0.7V ,rf=0Ω
Calculate ID1, ID2, and V0 .
(see ee261stMidtermGraphs in files) *
(4 Points)

13. Consider the circuit shown .
Determine the diode voltage and diode current given that Vg=0.6V,rf=50Ω
(see ee261stMidtermGraphs in files) *
(2 Points)

Enter your answer

14. Consider the LED circuit shown where V_γ=1.8V , [[and r]] _f=20Ω . Acceptable LED light intensity is obtained when the LED current is 10mA. If R=150Ω, determine V which results in such minimum current.
(see ee261stMidtermGraphs in files) *
(2 Points)

Enter your answer

15. Consider the circuit shown where both diodes are assumed ON. Given that
R_1=10 KΩ,R_2=30KΩ,
Vγ =0.7V ,rf=0Ω
Calculate ID1, ID2, and V0 .