



(GMI2752) Gemi Elektroniği/Kısa Sınav-1A

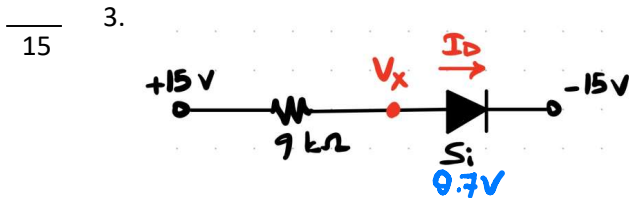
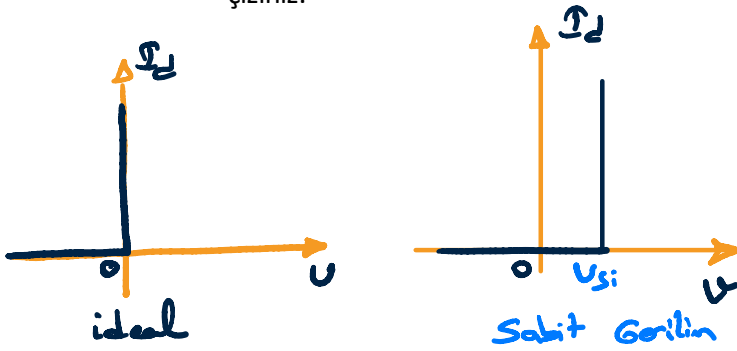
1. 12 A akım çeken 1,5 kW'lık bir gemi yardımcı makinesindeki gerilim düşümü nedir?

(A) 1.25 V (B) 120 V
(C) 10.42 V (D) 18 kV
125 V

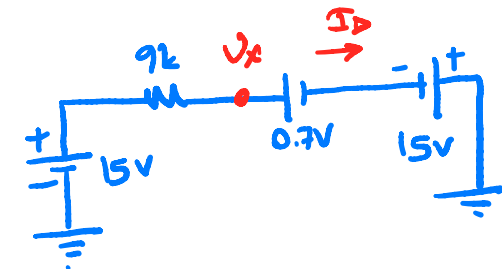
$$V \cdot I = 1500 \text{ W}$$

$$V = 1500 / 12$$

2. Bir Diyota ait Sabit Gerilim modeline (Constant-Voltage Model) ve İdeal Modeline ait Akım-Gerilim grafiklerini çiziniz.



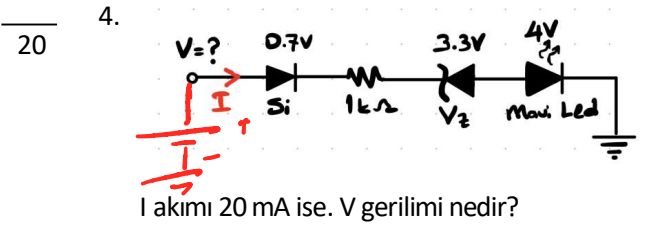
Devredeki diyot Si ise, V_x ve I_D akımını belirleyiniz.



$$-15 + 9I_D + 0.7 - 15 = 0$$

$$I_D = \frac{30 - 0.7}{9k} = 3.25 \text{ mA}$$

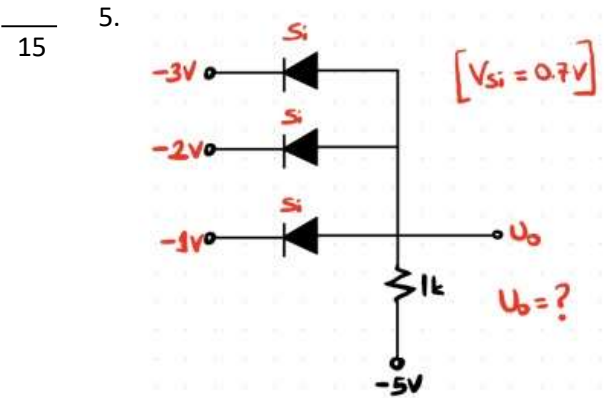
$$-15 + 9 \cdot 3.25 = 14.3 \text{ V}$$



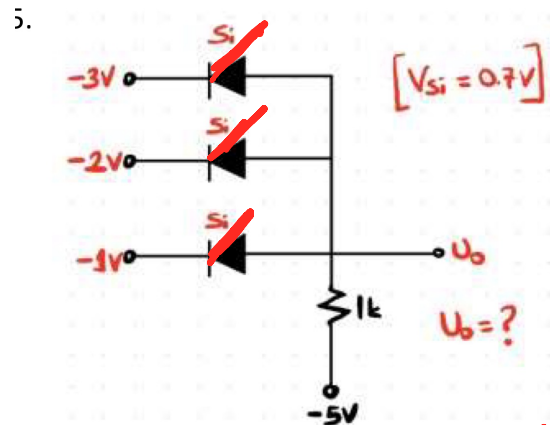
$$-V + 0.7 + I_D \cdot 1k + 3.3 + 4 = 0$$

$$V = 0.7 + 20 + 3.3 + 4$$

$$V = 28 \text{ V}$$



Devredeki Diyotlar Si ise, V_o gerilimini belirleyiniz.

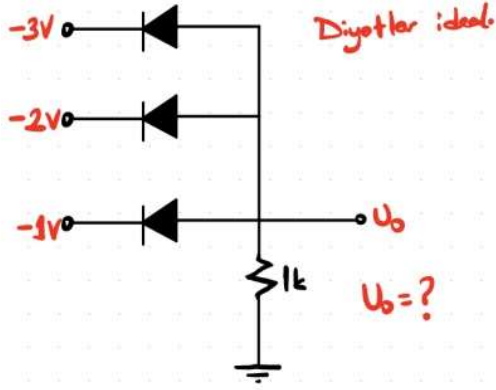


$$V_o = -5 \text{ V}$$

hepsi açık
Akım sıfır!

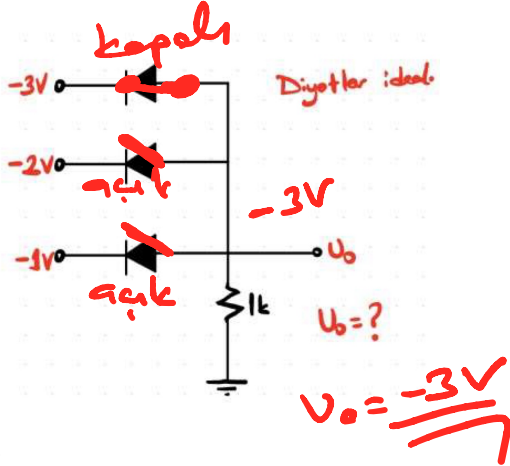
15

6.



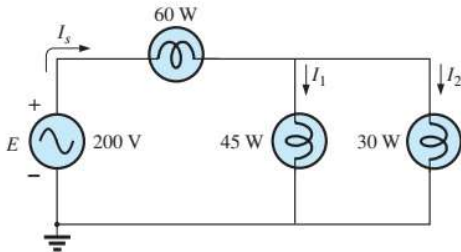
Diyotlar ideal ise V_o gerilimi nedir?

6.



10

7.



Şekildeki devrede lambalara ait güç tüketimleri verilmiştir. Kaynağa ait akımı bulunuz.

$$200 \cdot I_s = (45 + 30 + 60) \text{ W}$$

$$I_s = \frac{135}{200}$$

$$I_s = 0,675 \text{ A}$$