

## 6- LABORATORIYA ISHI

### Tiristorni ishlash tamoyilini o'rganish va sinash

**Ishning maqsadi:** Tiristorni ishlash tamoyilini o'rganish va sinash.

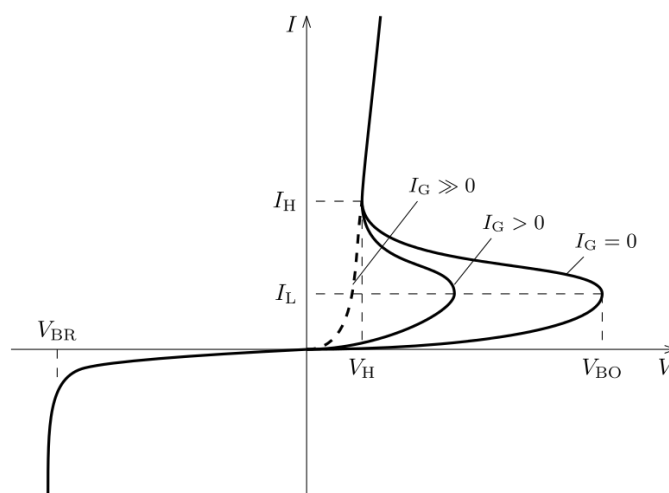
#### 1. Umumiy ma'lumotlar:



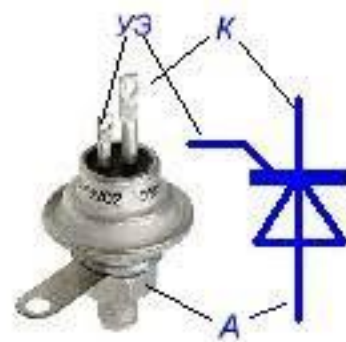
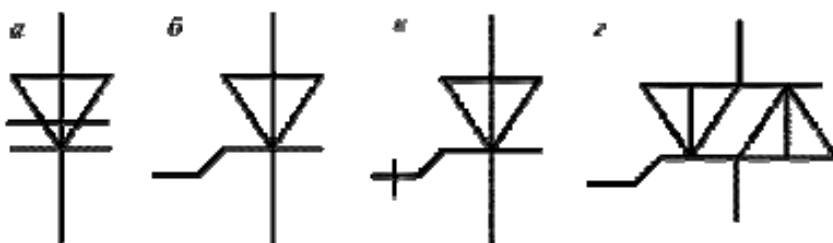
1-rasm. Tiristor (trinistor)ning belgilanishi

**1-rasmda** tiristorning oddiy ko'rinishi keltirilgan. U yarimo'tkazgichdan yasalgan to'rtta o'zaro almashinuvchi elektr o'tkazuvchanlik sohalaridan tashkil topgan bo'lib, uchta chiqishga ega: anod, katod va boshqaruvchi elektrod. Anod – tashqi qatlamga ega bo'lgan kontakt, katod esa tashqi n-qatlamga ega bo'lgan kontakt.

**Tiristor** yarimo'tkazgichli qurilma bo'lib, uning asosi yopiq holatdan ochiq holatga o'tish va aksincha to'rt qavatli tuzilishdir. Tiristorlar ochiq signal rejimida (boshqariladigan diod) elektr signallarini kalit nazorati uchun mo'ljallangan.



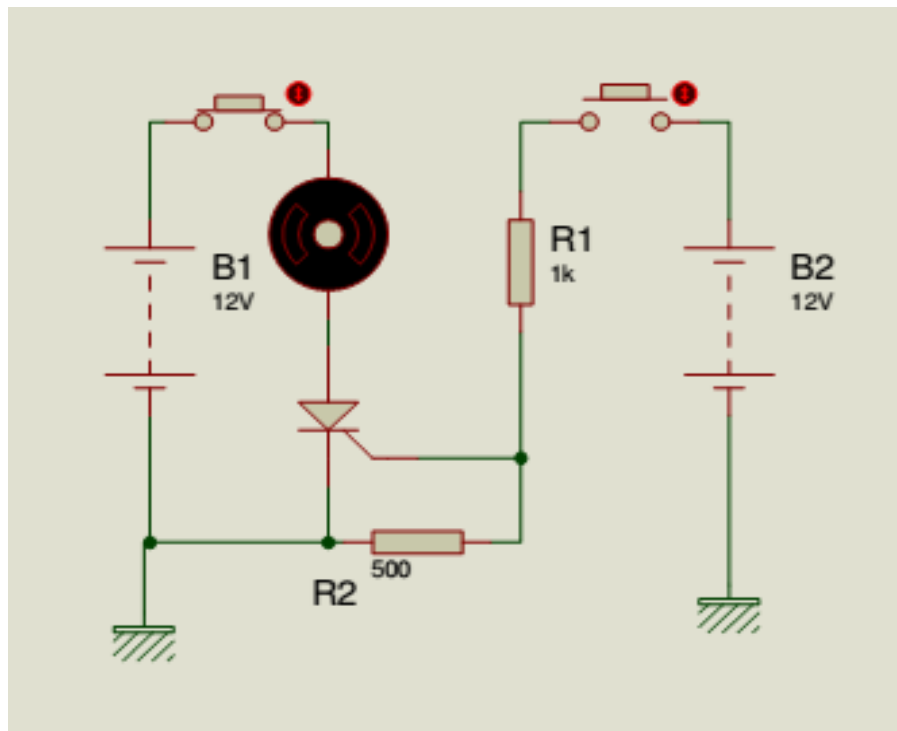
2-rasm. Tiristorning VAX si



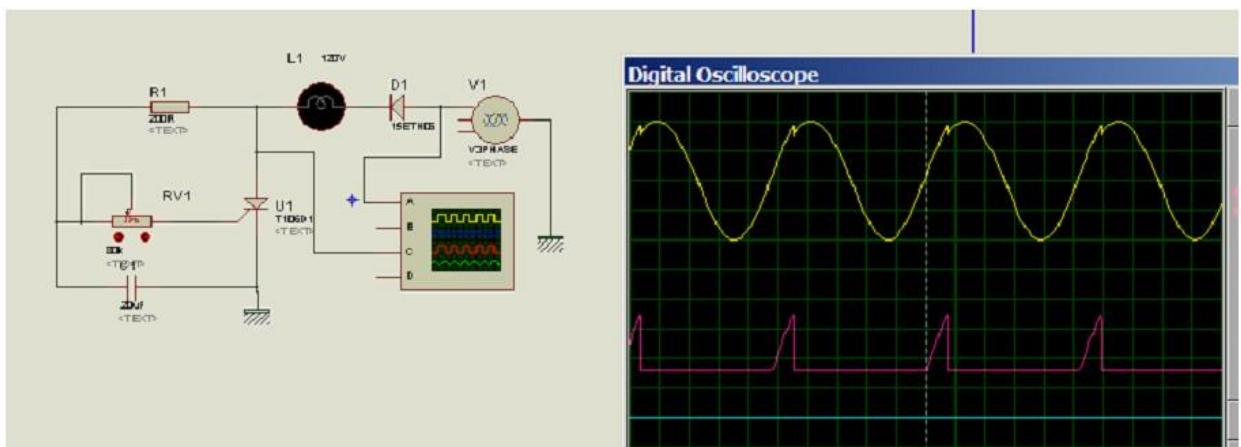
2-rasm. Tiristorlarning shartli belgilanishi: a–dinistor; b–bir operatsiyali tiristor; v–ikki operatsiyali tiristor; g– simistor

***Ishning bajarilishi***

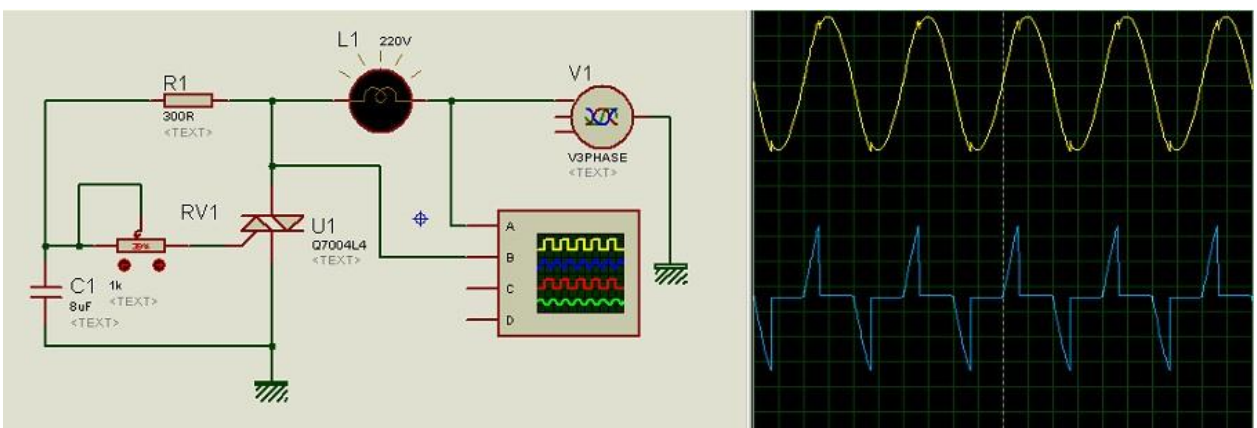
1. 3,4,5-rasmlarda keltirilgan sxemalarni yig‘ing (tekshirish uchun o‘qituvchiga ko‘rsating).
2. 4 va 5 sxemalar uchun grafiklarni chizishda potentsiometrni 20%, 60% va 77% holatlaridan foydalaning.
3. Himoya uchun barcha savollarga yozma javoblar keltiring.



3-rasm. Tiristorning o‘zgaras tok zanjirlarida ishlashining namoyishi

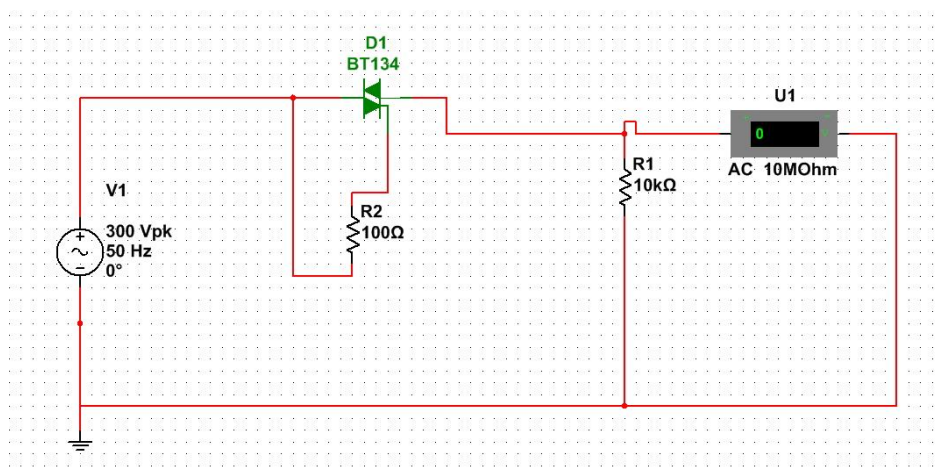
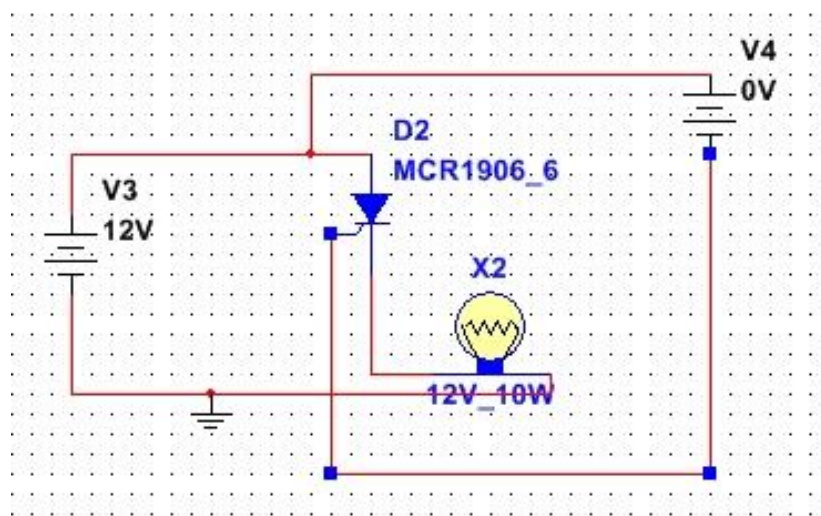
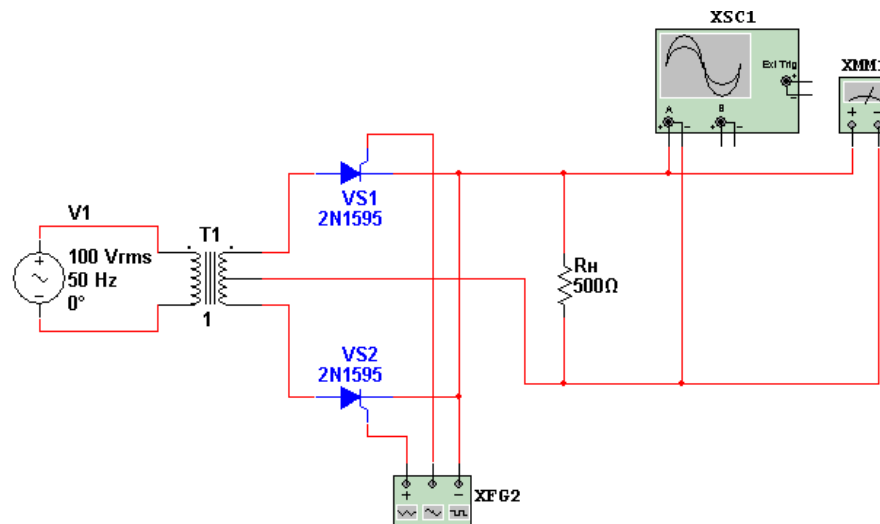


4-rasm. Tiristorning o‘zgaruvchan tok zanjirlarida ishlashining namoyishi



5-rasm. Simistor (triak)ning o‘zgaruvchan tok zanjirlarida ishlashining namoyishi

## Mustaqil bajarish uchun topshiriqlar.



### ***Nazorat savollari***

1. Tiristorning ishlash tamoyilini tushuntiring.
2. Tiristorning ishi triak ishidan nimasi bilan farqlanadi?
3. Uch fazali generator kuchlanishi qanday oʻrnatiladi?
4. Barcha uchta sxemani chizing va komponentlarini ayting.
5. Diodlar, tiristorlarning ishlatilishiga misollar keltiring.