

Student ID: _____

Student Name: _____

Group: _____

1. For the circuit in Fig 1, given the diode has an offset voltage of 0.7V:

6 marks

a) Determine the state of the diode

If you conclude the diode is on, provide the diode current (I_D).

If you conclude the diode is off, provide the diode voltage (V_D);

b) Hence the voltage across the 2 k Ω resistor.

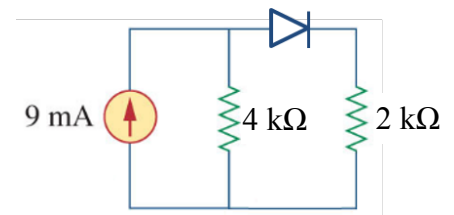


Fig 1

2. For the circuit on the in Fig 2, given that the diode has an offset voltage of 0.7V:

4 marks

- Determine the state of the diode
- Find the power consumed by the diode

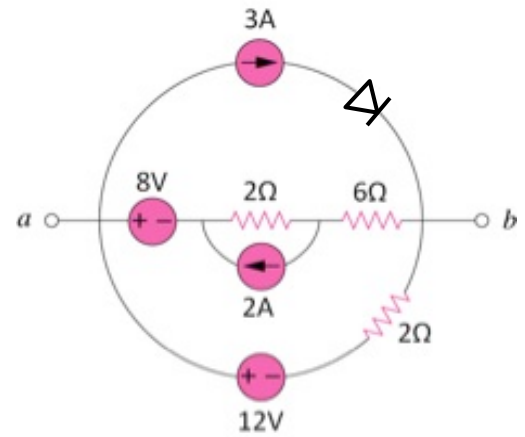


Fig 2