ID:	Name:

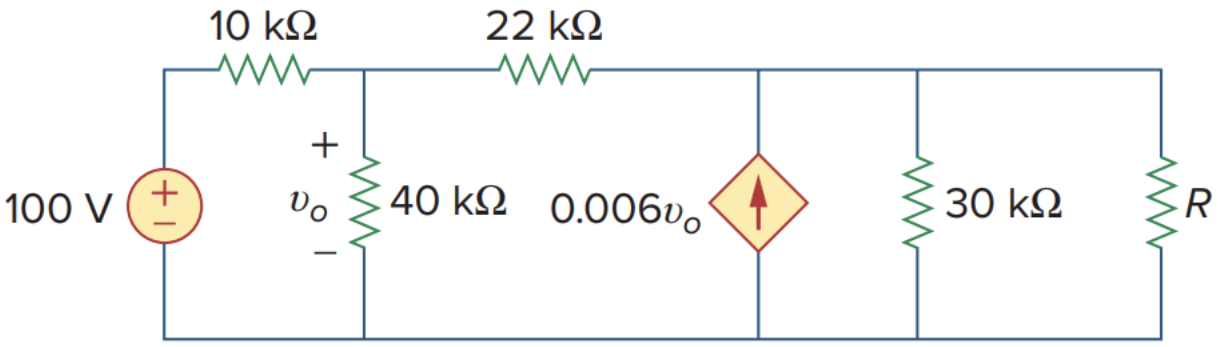
Brac University
Semester: Summer 2023
Course Code: CSE250
Circuits And Electronics
Section: 23
Faculty: PRM

Assessment: *Assignment-3*

- ✓ Submit softcopy online by deadline
- ✓ Submit hardcopy in class by deadline

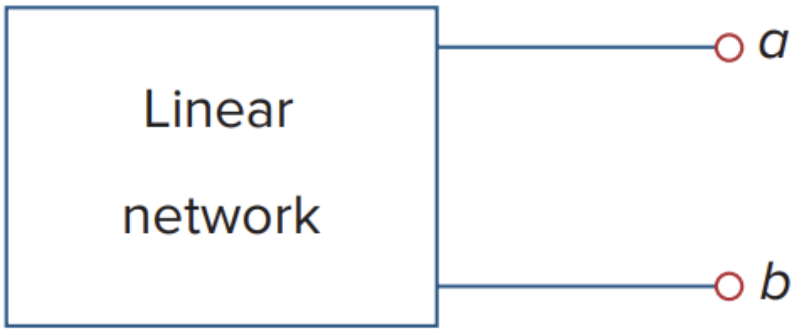
■ Question 1 of 4 *[CO2] [10 marks]*

Find the value of R which will give you the maximum output power. Also **find** the value of the maximum power.



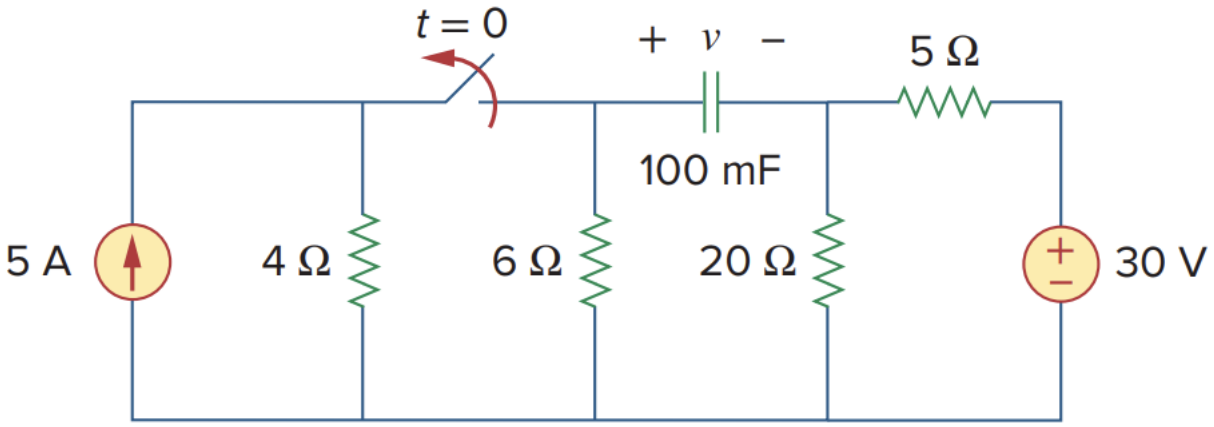
■ Question 2 of 4 *[CO3] [10 marks]*

The Thevenin equivalent at terminals a-b of the linear network given below is to be determined. When a 10-kΩ resistor is connected to terminals a-b, the voltage V_{ab} is measured as 20 V. When a 30-kΩ resistor is connected to the terminals, V_{ab} is measured as 40 V. **Calculate**: (a) the Thevenin equivalent at terminals a-b, (b) V_{ab} when a 20-kΩ resistor is connected to terminals a-b.



■ Question 3 of 4 *[CO3] [10 marks]*

Calculate v(t) for t<0 and t>0.



■ Question 4 of 4 *[CO2] [10 marks]*

If v_s=10V for t<0 and v_s=30V for t>0, then **find** the value of v_0.