Enrolment No: E22CSEU0827 Name of Student: MADHAV GUPTA

MID-TERM EXAMINATION EVEN SEMESTER 2022-23

COURSE CODE	**CSET102**	**MAX. DURATION**	**1 HRS**
COURSE TITLE	**INTRODUCTION TO ELECTRICAL AND ELECTRONICS ENGINEERING**		
COURSE CREDIT	**5**	**TOTAL MARKS**	**20**

1) Find the voltage V_{ab} and the current i_0 in the circuit shown in Figure 1. **(6 Marks)**

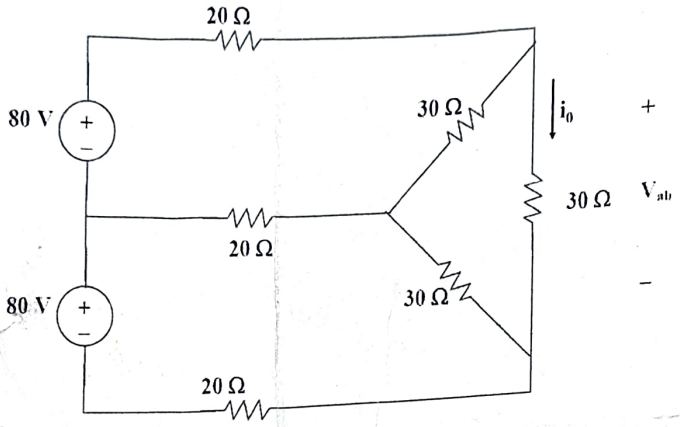

Figure 1

2) For the circuit shown in Figure 2, determine the power consumed by the 5Ω resistor. **(3 Marks)**

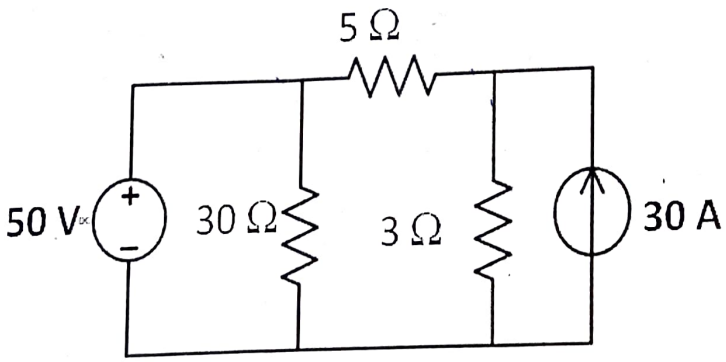

Figure 2

3) Determine the current through the 6Ω resistor for the circuit shown in Figure 3. **(2 Marks)**

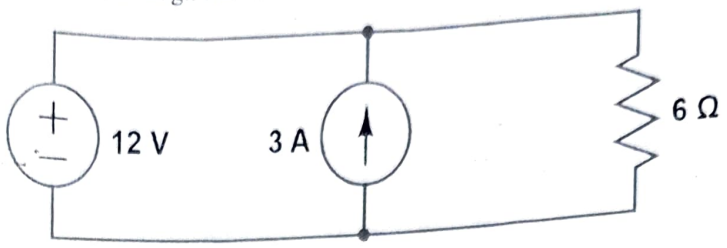

Figure 3

4) Replace the circuit between nodes *A* and *B* in Figure 4 with a voltage source in series with a single resistor. Determine the open circuit voltage in the simplified circuit. **(5 marks)**

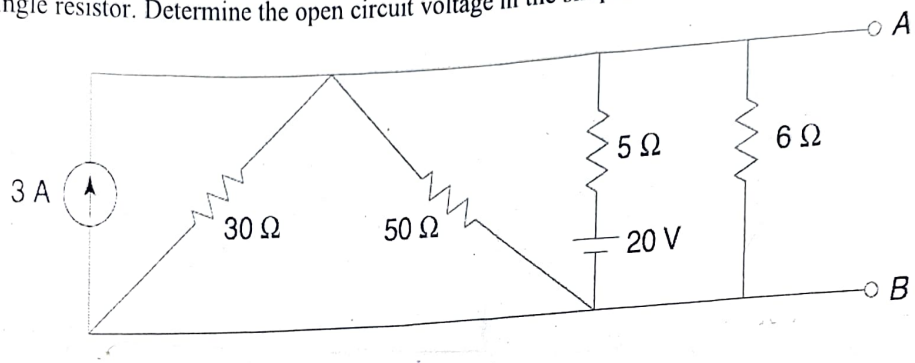

Figure 4

5) Simplify the circuit shown in Figure 5 using Thevenin's theorem. The load resistance is connected between nodes *A* and *B*. Find the voltage across the load resistor and the current flowing through the load resistor. **(4 Marks)**

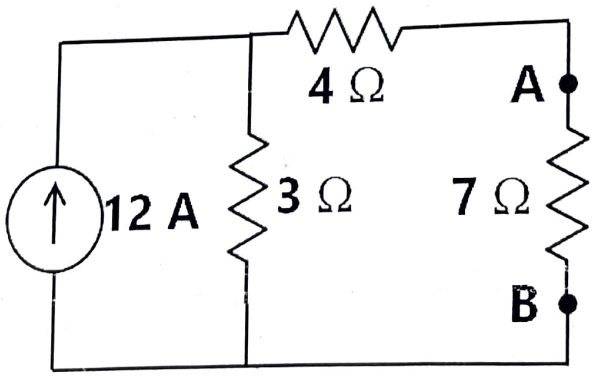

Figure 5

END OF QUESTION PAPER