



Daffodil International University
Department of Electrical and Electronic Engineering
Faculty of Engineering
Midterm Examination, Summer-2026

Course Code: 0713-111

Course Title: Electrical Circuits I

Section: A, B, C, D, E, F

Level-Term: L1-T1

by- Tanvir

Full Marks: 25

Exam Date: July 04, 2026

Time: 1.5 Hours

Notes: Answer all questions below. The second right most column indicates the course outcomes (COs) with respective Bloom's level, and the right column indicates the allocated marks.

Q1. (a) **Describe** Kirchhoff's Laws for linear electrical circuit analysis.

CO1 02

(b) **Calculate** the power supplied or absorbed by each element in Fig. 1.

C(2)

CO1 02

C(2)

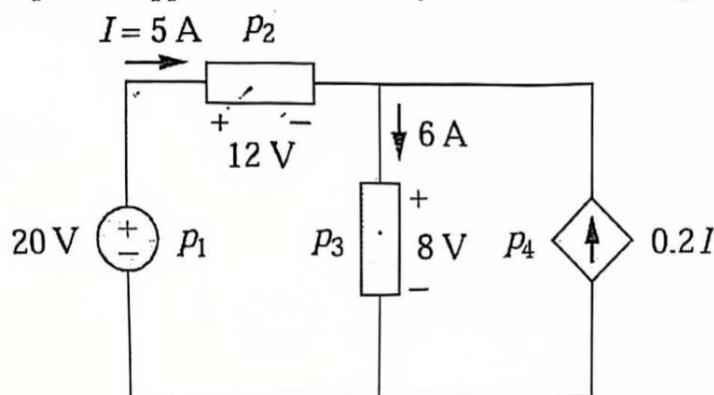


Fig. 1

(c) **Calculate** the equivalent resistance R_{ab} at terminals a-b in Fig. 2.

CO1 03

C(2)

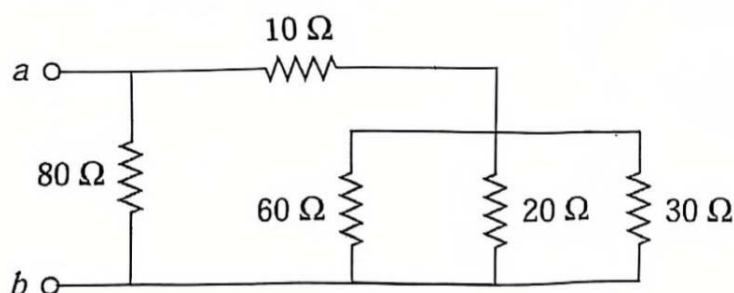


Fig. 2

Q2. **Calculate** I_o for the circuit of Fig. 3 using Δ -Y method.

CO2 06

C(3)

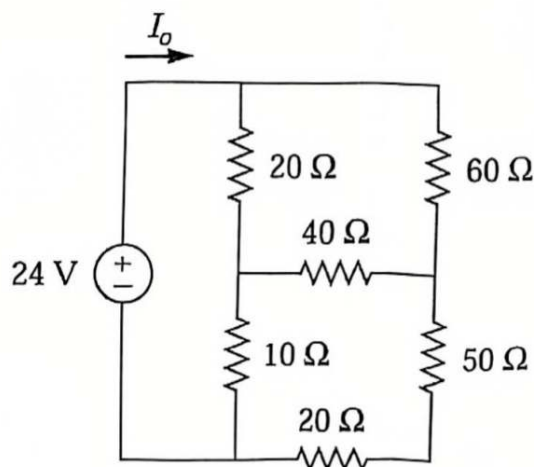


Fig. 3

Q3. Find v and i in the circuit of Fig. 4 using nodal analysis.

CO2 06
C(3)

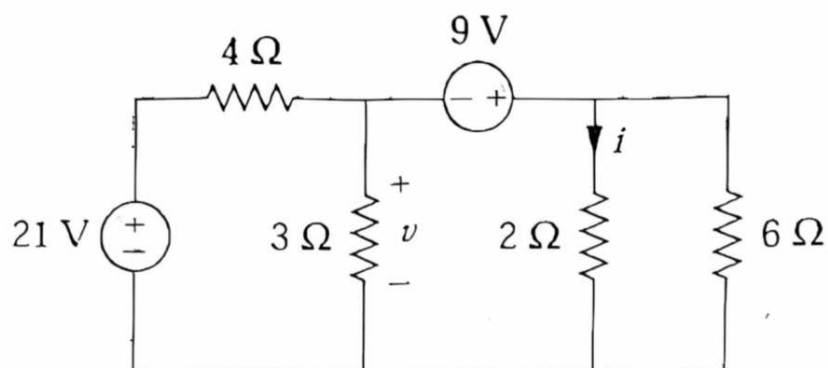


Fig. 4

Q4. Determine i_1 , i_2 and i_3 in Fig. 5 using mesh analysis.

CO2 06
C(3)

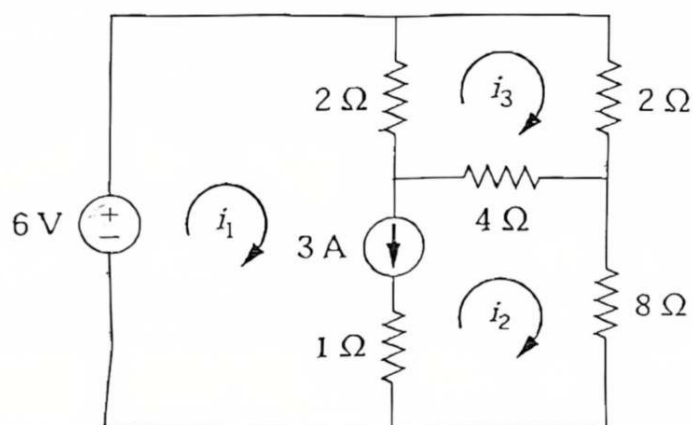


Fig. 5