جامعة بيرزيت

BIRZEIT UNIVERSITY

Physics Department

Physics 112

Experiment3

Network analysis 1
The superposition principle and Kirchhoff's rules

Student's name:
Student's No.:

Partner's name:
Partners No.:

Section:

Instructor:

Date:

Abstract:

Theory:

Calculations:

1) Using Kirchhoff's rules find the values of the currents passing through the three carbon resistors.
2) Using superposition principle, find the value of the current passing through R_3 when each source acting alone.

Data:

(a) Measure the current passing through the three carbon resistors:

I_1 (K-exp) =

I_2 (K-exp) =

I_3 (K-exp) =

(b) Measure the current passing through R_1 :

-when ε_1 acting alone: I_{11}=

- when ε_2 acting alone: I_{12}=

I_1(spp-exp) =

(c) Measure the current passing through R_2 :

-when ε_1 acting alone: I_{21}=

- when ε_2 acting alone: I_{22}=

I_2(spp-exp)=

(d) Measure the current passing through R_3 :

-when ε_1 acting alone: I_{31}=

- when ε_2 acting alone: I_{32}=

I_3(spp-exp) =

Results and conclusion: