Name:

Brac University
Semester: Fall 2025
Course Code: CSE481
Quantum Computing I
Section: 01
Faculty: SDS

Set A

Assessment: *Lab Quiz*
Duration: 1 hour
Date: February 13, 2026
Full Marks: 10

- ✓ No washroom breaks. Phones must be turned off. Using/carrying any notes during the exam is not allowed.
- ✓ All **4 question(s)** are compulsory. Marks allotted for each question are mentioned beside each question.
- ✓ Write your answers inside the indicated boxes (where applicable). If you run out of room, continue on the back page.
- ✓ Symbols have their usual meanings.

DO NOT WRITE ANYTHING ELSE INSIDE THIS BORDER

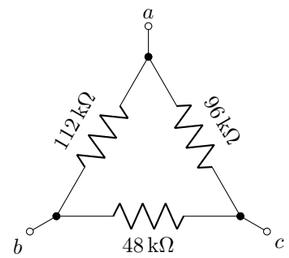
Student ID

Set Identifier

Answers (Q1-Q10) Answers (Q11-Q20) Answers (Q21-Q30)

DO NOT WRITE ANYTHING ELSE INSIDE THIS BORDER

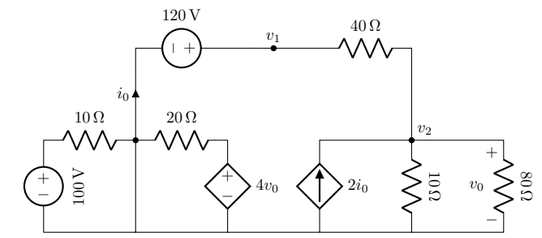
♢ Question 1 of 4 *[CO3] [5 marks]*



Which of the following statements is true?

(a) $R_{ab} = R_{bc} = R_{ca} = 24.889\,\text{k}\Omega$
(b) $R_{ab} = 63\,\text{k}\Omega, R_{bc} = 39\,\text{k}\Omega, R_{ca} = 60\,\text{k}\Omega$
(c) $R_{ab} = 63\,\Omega, R_{bc} = 39\,\Omega, R_{ca} = 60\,\Omega$
(d) $R_{ab} = 112\,\text{k}\Omega, R_{bc} = 48\,\text{k}\Omega, R_{ca} = 96\,\text{k}\Omega$
(e) None of the above

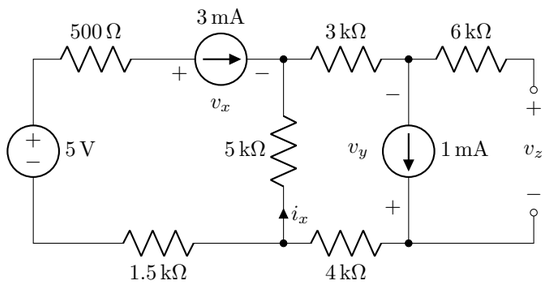
♢ Question 2 of 4 *[CO1] [1 mark]*



How many nodes are in this circuit?

(a) 6 **(b)** 3 **(c)** 5 **(d)** 7 **(e)** 4

♢ Question 3 of 4 *[CO3] [2 marks]*



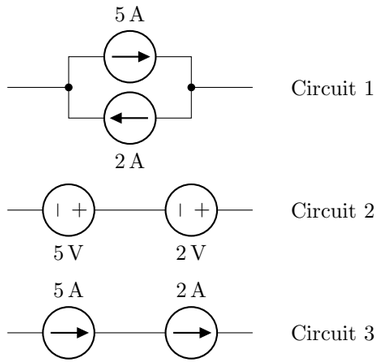
(a) a

(b) b

(c) c

Which of the following circuits is/are impossible (violates Kirchhoff's laws)?

♢ Question 4 of 4 *[CO1] [2 marks]*



(a) Circuit 1 **(b)** Circuit 2 **(c)** Circuit 3 **(d)** Circuit 1 & 3 **(e)** None of the aboveDo you have any suggestion that may improve this course?

Your Suggestions

..... ↓ *Your Roughs* ↓ .....

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Quantum Computing I
Section: 01
Faculty: SDS

Set **B**

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Duration: 1 hour
Date: February 13, 2026
Full Marks: 10

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Student ID: 0 1 2 3 4 5 6 7 8 9

Set Identifier: § ● ● ● ● ● ○ ●

Answers (Q1-Q10): A B C D
1 ○ ○ ○ ○
2 ○ ○ ○ ○
3 ○ ○ ○ ○
4 ○ ○ ○ ○
5 ○ ○ ○ ○
6 ○ ○ ○ ○
7 ○ ○ ○ ○
8 ○ ○ ○ ○
9 ○ ○ ○ ○
10 ○ ○ ○ ○

Answers (Q11-Q20): A B C D
11 ○ ○ ○ ○
12 ○ ○ ○ ○
13 ○ ○ ○ ○
14 ○ ○ ○ ○
15 ○ ○ ○ ○
16 ○ ○ ○ ○
17 ○ ○ ○ ○
18 ○ ○ ○ ○
19 ○ ○ ○ ○
20 ○ ○ ○ ○

Answers (Q21-Q30): A B C D
21 ○ ○ ○ ○
22 ○ ○ ○ ○
23 ○ ○ ○ ○
24 ○ ○ ○ ○
25 ○ ○ ○ ○
26 ○ ○ ○ ○
27 ○ ○ ○ ○
28 ○ ○ ○ ○
29 ○ ○ ○ ○
30 ○ ○ ○ ○

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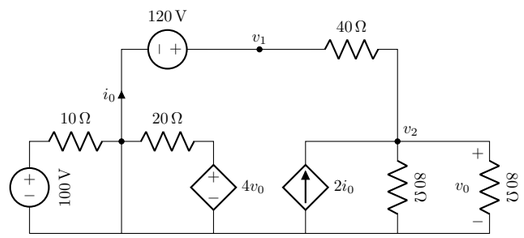
♢ Question 1 of 4 *[CO1] [1 mark]*

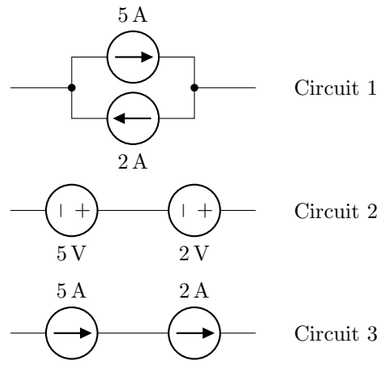


How many nodes are in this circuit?

(a) 3 **(b)** 7 **(c)** 4 **(d)** 6 **(e)** 5

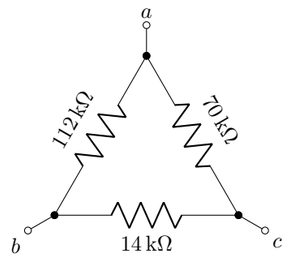
♢ Question 2 of 4 *[CO1] [2 marks]*

Which of the following circuits is/are impossible (violates Kirchhoff's laws)?



(a) Circuit 1 & 3 **(b)** Circuit 1 **(c)** Circuit 3
(d) Circuit 2 **(e)** None of the above

♢ Question 3 of 4 *[CO3] [5 marks]*



Which of the following statements is true?

(a) $R_{ab} = 48\,\Omega, R_{bc} = 13\,\Omega, R_{ca} = 45\,\Omega$

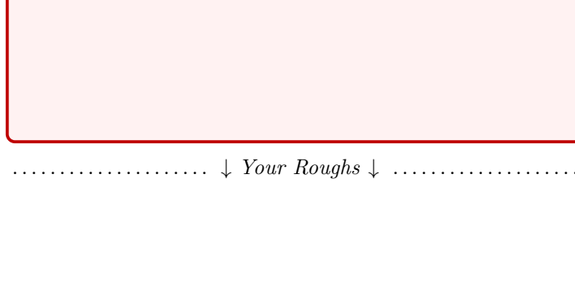
(b) $R_{ab} = 48\,\text{k}\Omega, R_{bc} = 13\,\text{k}\Omega, R_{ca} = 45\,\text{k}\Omega$

(c) $R_{ab} = 112\,\text{k}\Omega, R_{bc} = 14\,\text{k}\Omega, R_{ca} = 70\,\text{k}\Omega$

(d) $R_{ab} = R_{bc} = R_{ca} = 10.566\,\text{k}\Omega$

(e) None of the above

♢ Question 4 of 4 *[CO3] [2 marks]*



(a) a

(b) b

(c) c

Do you have any suggestion that may improve this course?

Your Suggestions

. . . . . ↓ *Your Roughs* ↓ . . . . .

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Faculty: SDS

Set **C**

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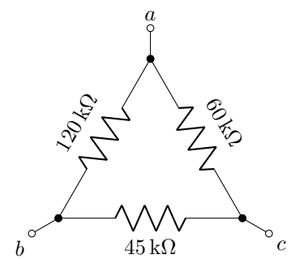
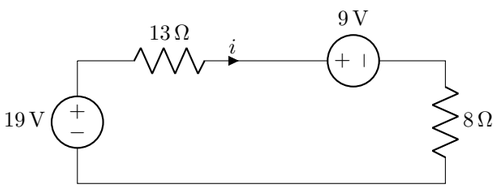
♢ Question 1 of 4 *[CO3] [5 marks]*



Which of the following statements is true?

(a) $R_{ab} = 56\,\text{k}\Omega, R_{bc} = 36\,\text{k}\Omega, R_{ca} = 44\,\text{k}\Omega$
(b) $R_{ab} = 120\,\text{k}\Omega, R_{bc} = 45\,\text{k}\Omega, R_{ca} = 60\,\text{k}\Omega$
(c) $R_{ab} = 56\,\Omega, R_{bc} = 36\,\Omega, R_{ca} = 44\,\Omega$
(d) $R_{ab} = R_{bc} = R_{ca} = 21.176\,\text{k}\Omega$
(e) None of the above

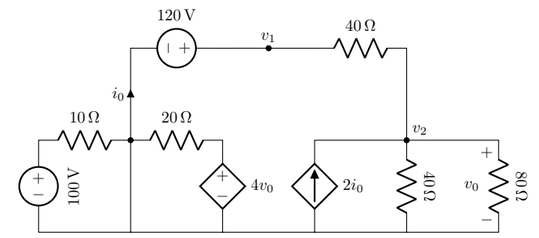
♢ Question 2 of 4 *[CO3] [2 marks]*



What's the relation between v_1, v_2 and i?

(a) $-19 + 13i - 9 + 8i = 0$
(b) $-19 - 13i - 9 + 8i = 0$
(c) $-19 - 13i + 9 + 8i = 0$
(d) $-19 + 13i + 9 + 8i = 0$
(e) None of the above

♢ Question 3 of 4 *[CO1] [1 mark]*

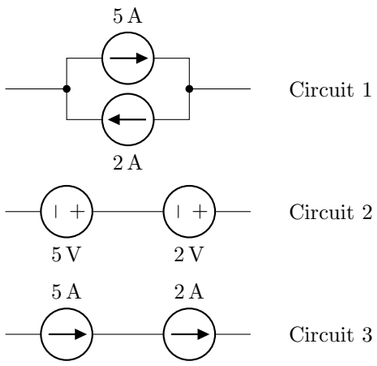


How many nodes are in this circuit?

(a) 3 **(b)** 6 **(c)** 4 **(d)** 7 **(e)** 5

♢ Question 4 of 4 *[CO1] [2 marks]*

Which of the following circuits is/are impossible (violates Kirchhoff's laws)?



(a) Circuit 3 **(b)** Circuit 1 **(c)** Circuit 1 & 3 **(d)** Circuit 2 **(e)** None of the aboveDo you have any suggestion that may improve this course?

Your Suggestions

..... ↓ *Your Roughs* ↓ .....

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BRAC UNIVERSITY
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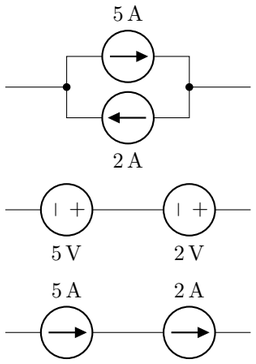
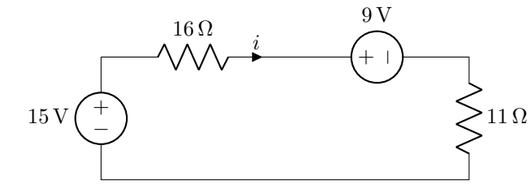
♢ Question 1 of 4 *[CO1] [2 marks]*

Which of the following circuits is/are impossible (violates Kirchhoff's laws)?



(a) Circuit 2 **(b)** Circuit 3 **(c)** Circuit 1 **(d)** Circuit 1 & 3 **(e)** None of the above

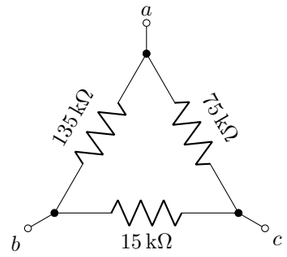
♢ Question 2 of 4 *[CO3] [2 marks]*



What's the relation between v_1, v_2 and i?

(a) $-15 - 16i - 9 + 11i = 0$
(b) $-15 + 16i + 9 + 11i = 0$
(c) $-15 + 16i - 9 + 11i = 0$
(d) $-15 - 16i + 9 + 11i = 0$
(e) None of the above

♢ Question 3 of 4 *[CO3] [5 marks]*



Which of the following statements is true?

(a) $R_{ab} = 54\,\Omega, R_{bc} = 14\,\Omega, R_{ca} = 50\,\Omega$

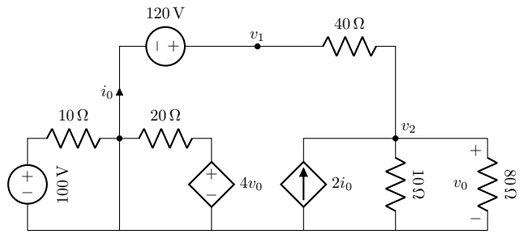
(b) $R_{ab} = R_{bc} = R_{ca} = 11.441\,\text{k}\Omega$

(c) $R_{ab} = 135\,\text{k}\Omega, R_{bc} = 15\,\text{k}\Omega, R_{ca} = 75\,\text{k}\Omega$

(d) $R_{ab} = 54\,\text{k}\Omega, R_{bc} = 14\,\text{k}\Omega, R_{ca} = 50\,\text{k}\Omega$

(e) None of the above

♢ Question 4 of 4 *[CO1] [1 mark]*



How many nodes are in this circuit?

(a) 7 **(b)** 5 **(c)** 6 **(d)** 4 **(e)** 3 Do you have any suggestion that may improve this course?

Your Suggestions

..... ↓ *Your Roughs* ↓ .....