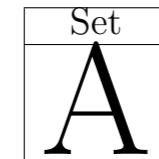


Name: \_\_\_\_\_

**Brac University**

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



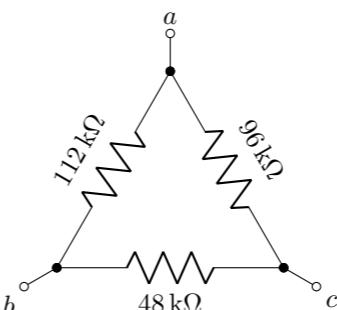
Assessment: Lab Quiz  
 Duration: 1 hour  
 Date: February 13, 2026  
 Full Marks: 10

- ✓ 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                                   | ■ Answers (Q1-Q10)     | ■ Answers (Q11-Q20)        | ■ Answers (Q21-Q30)        |  |
|   | 0    1    2    3    4    5    6    7    8    9 | 1    2    3    4    5  | 11    12    13    14    15 | 21    22    23    24    25 |  |
|   | §    ●●●●●●○                                   | 6    7    8    9    10 | 16    17    18    19    20 | 26    27    28    29    30 |  |
|   |  | A    B    C    D       | A    B    C    D           | A    B    C    D           |  |
|   |  | 1    2    3    4    5  | 11    12    13    14    15 | 21    22    23    24    25 |  |
|   |  | A    B    C    D       | A    B    C    D           | A    B    C    D           |  |
|   |  | 6    7    8    9    10 | 16    17    18    19    20 | 26    27    28    29    30 |  |
|   |  | A    B    C    D       | A    B    C    D           | A    B    C    D           |  |
|   |  | 1    2    3    4    5  | 11    12    13    14    15 | 21    22    23    24    25 |  |
| DO NOT WRITE ANYTHING ELSE INSIDE THIS BORDER |  |                        |                            |                            |  |

## ◊ Question 1 of 4

[CO3] [5 marks]

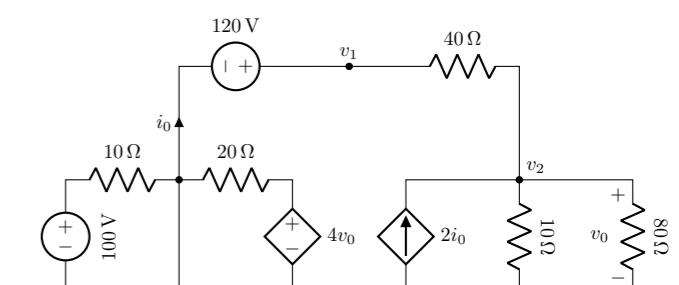


Which of the following statements is true?

- $R_{ab} = R_{bc} = R_{ca} = 24.889 \text{ k}\Omega$
- $R_{ab} = 63 \text{ k}\Omega, R_{bc} = 39 \text{ k}\Omega, R_{ca} = 60 \text{ k}\Omega$
- $R_{ab} = 63 \Omega, R_{bc} = 39 \Omega, R_{ca} = 60 \Omega$
- $R_{ab} = 112 \text{ k}\Omega, R_{bc} = 48 \text{ k}\Omega, R_{ca} = 96 \text{ k}\Omega$
- None of the above

## ◊ Question 2 of 4

[CO1] [1 mark]

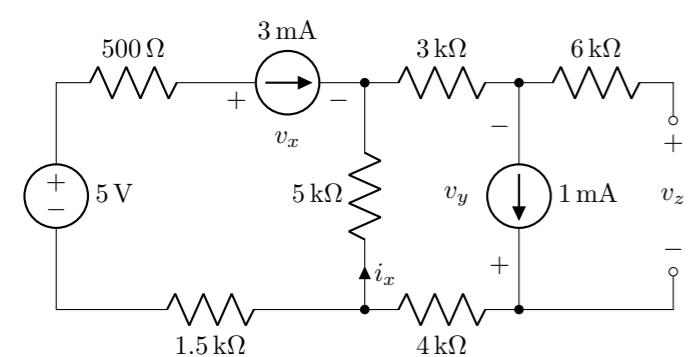


How many nodes are in this circuit?

- 6
- 3
- 5
- 7
- 4

## ◊ Question 3 of 4

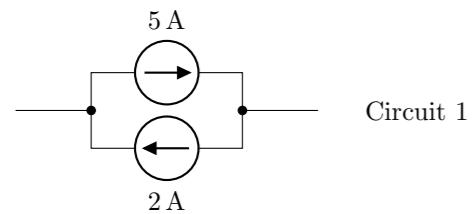
[CO3] [2 marks]



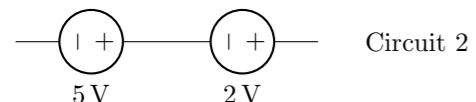
- (a) a  
 (b) b  
 (c) c

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

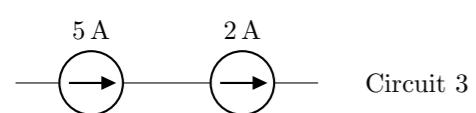
◊ **Question 4 of 4** [CO1] [2 marks]



Circuit 1



Circuit 2



Circuit 3

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

Do you have any suggestion that may improve this course?

Your Suggestions

..... ↓ Your Roughs ↓ .....

Name: \_\_\_\_\_

**Brac University**

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 Quantum Computing I  
 Section: 01  
 Faculty: SDS

Set  
**B**

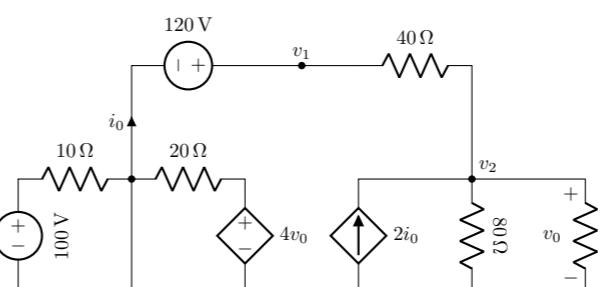
Assessment: Lab Quiz  
 Duration: 1 hour  
 Date: February 13, 2026  
 Full Marks: 10

- ✓ 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.

|                |                                  |                                  |                       |                                  |
|----------------|----------------------------------|----------------------------------|-----------------------|----------------------------------|
| Student ID     | Answers (Q1-Q10)                 | Answers (Q11-Q20)                | Answers (Q21-Q30)     |                                  |
| 0              | A B C D                          | A B C D                          | A B C D               |                                  |
| 1              | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/>            |
| 2              | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/>            |
| 3              | <input checked="" type="radio"/> | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/>            |
| 4              | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/>            |
| 5              | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/>            |
| 6              | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/>            |
| 7              | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/>            |
| 8              | <input type="radio"/>            | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/>            |
| 9              | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/>            |
| 10             | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/>            |
| Set Identifier | § ●●●●●○●                        |                                  |                       |                                  |
| 11             | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/>            |
| 12             | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/>            |
| 13             | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> | <input checked="" type="radio"/> |
| 14             | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/>            |
| 15             | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/>            |
| 16             | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/>            |
| 17             | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/>            |
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| 22             | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/>            |
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| 29             | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/>            |
| 30             | <input type="radio"/>            | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/>            |

## ◊ 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

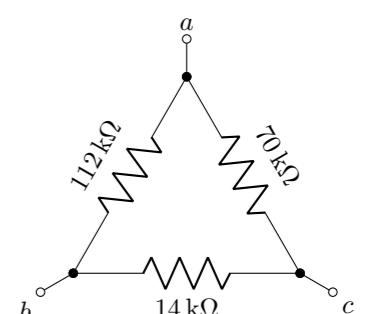
[CO1] [2 marks]

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

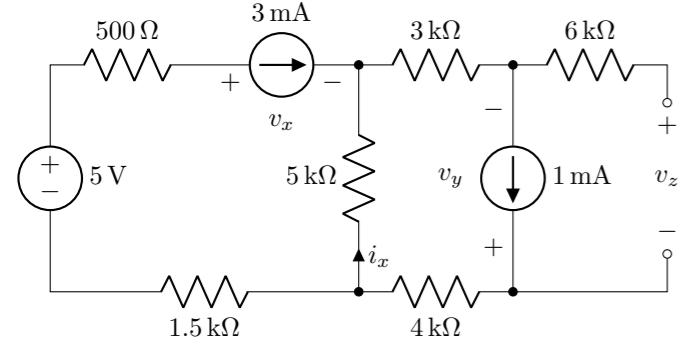
[CO3] [5 marks]



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 ↓ .....



Brac University

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Quantum Computing I  
Section: 01  
Faculty: SDS

# Set C

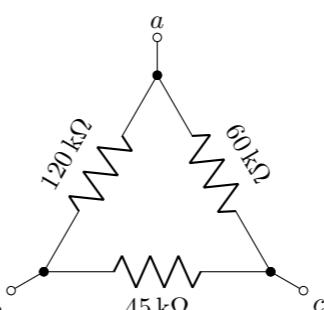
Assessment: *Lab Quiz*  
Duration: 1 hour  
Date: February 13, 2026  
Full Marks: 10

- ✓ 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.

◆ Question 1 of 4

[CO3] [5 marks] |

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

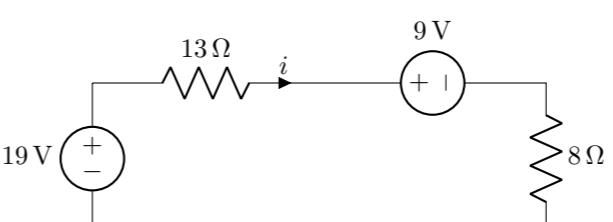


Which of the following statements is true?

- (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]



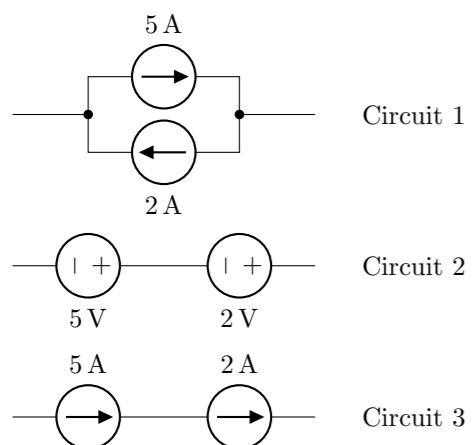
How many nodes are in this circuit?

- (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 above  
Do you have any suggestion that may improve this course?

Your Suggestions

..... ↓ Your Roughs ↓ .....

Name: \_\_\_\_\_

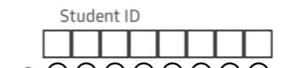
**Brac University**

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

|     |
|-----|
| Set |
| D   |

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

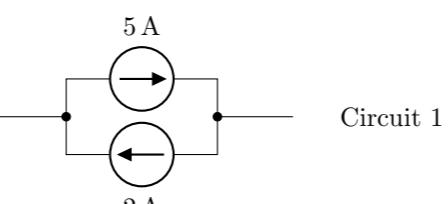
- ✓ No washroom breaks. Phones must be turned off. Using/carrying any notes during the exam is not allowed.
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|   |  |  |   |
|---|--|--|---|
| DO NOT WRITE ANYTHING ELSE INSIDE THIS BORDER | Student ID<br><br>0 1 2 3 4 5 6 7 8 9<br><br>Set Identifier<br> | Answers (Q1-Q10)<br>A B C D<br>1 2 3 4 5<br><br>Answers (Q11-Q20)<br>A B C D<br>11 12 13 14 15<br><br>Answers (Q21-Q30)<br>A B C D<br>21 22 23 24 25<br><br>Answers (Q21-Q30)<br>A B C D<br>26 27 28 29 30 | DO NOT WRITE ANYTHING ELSE INSIDE THIS BORDER |
|---|--|--|---|

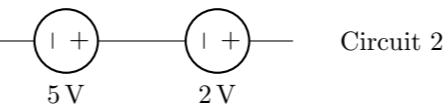
## ◊ Question 1 of 4

[CO1] [2 marks]

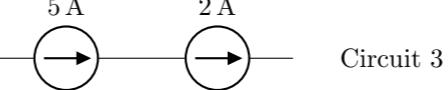
Which of the following circuits is/are impossible (violates Kirchhoff's laws)?



Circuit 1



Circuit 2

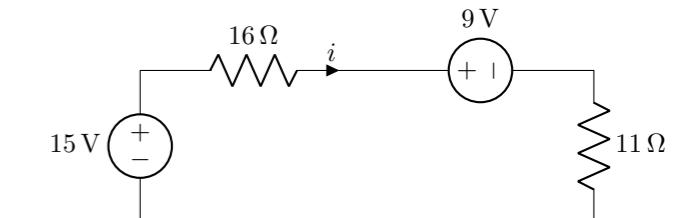


Circuit 3

- (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]

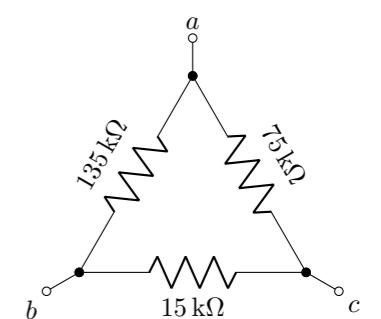


What's the relation between  $v_1$ ,  $v_2$  and  $i$ ?

- (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]

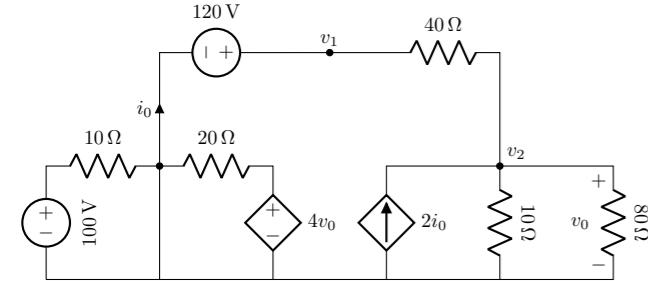


Which of the following statements is true?

- (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 ↓ .....



