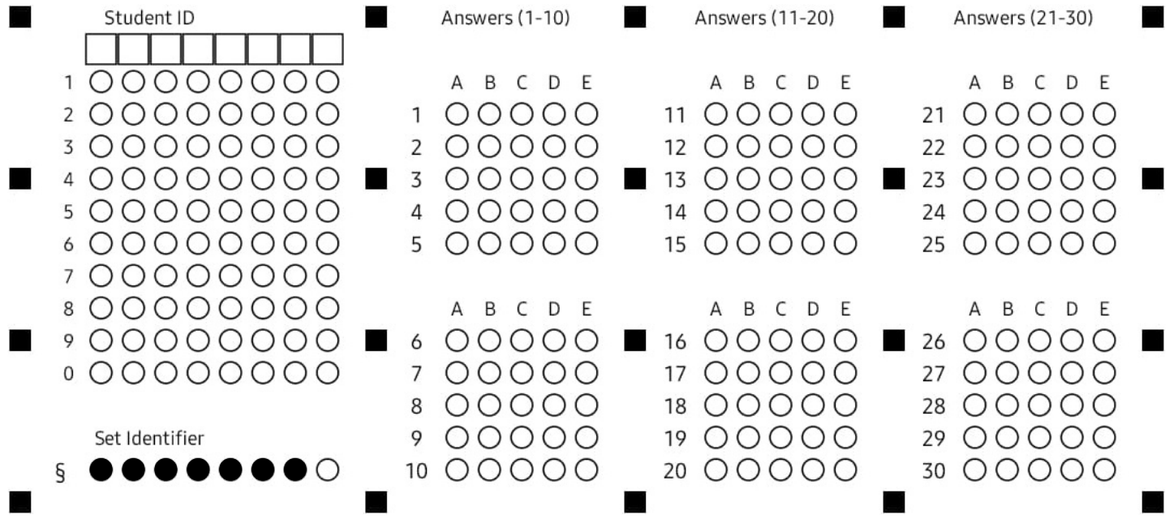
ID:	Name:

Brac University
Semester: Fall 2023
Course Code: CSE250
Circuits And Electronics
Section: 18
Faculty: SDS

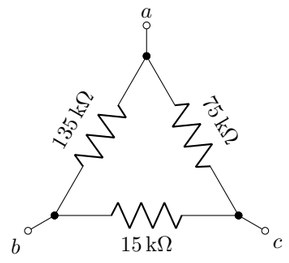
Set A

Assessment: *Class Assignment 1*
Duration: 1 hour 20 minutes
Date: September 28, 2023
Full Marks: 10

- ✓ No washroom breaks. Phones must be turned off. Using/carrying any notes during the exam is not allowed.
- ✓ All **4 questions** 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]*



Which of the following statements is true?

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

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

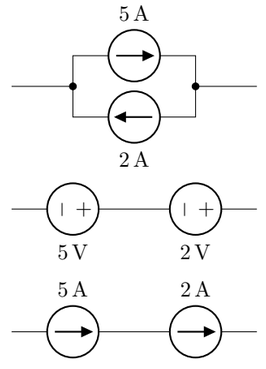
(C) $\boldsymbol{R_{ab} = 54\,\text{k}\Omega, R_{bc} = 14\,\text{k}\Omega, R_{ca} = 50\,\text{k}\Omega}$

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

(E) None of the above

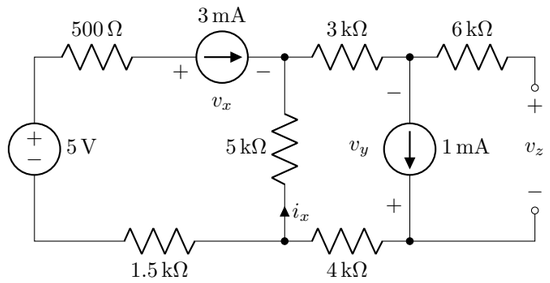
♢ Question 2 of 4 *[CO1] [2 marks]*

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 3 of 4 *[CO3] [2 marks]*

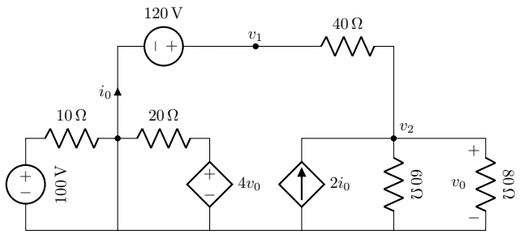


(A) b

(B) **a**

(C) c

♢ Question 4 of 4 *[CO1] [1 mark]*



How many nodes are in this circuit?

(A) 7 (B) 3 (C) **5** (D) 4 (E) 6

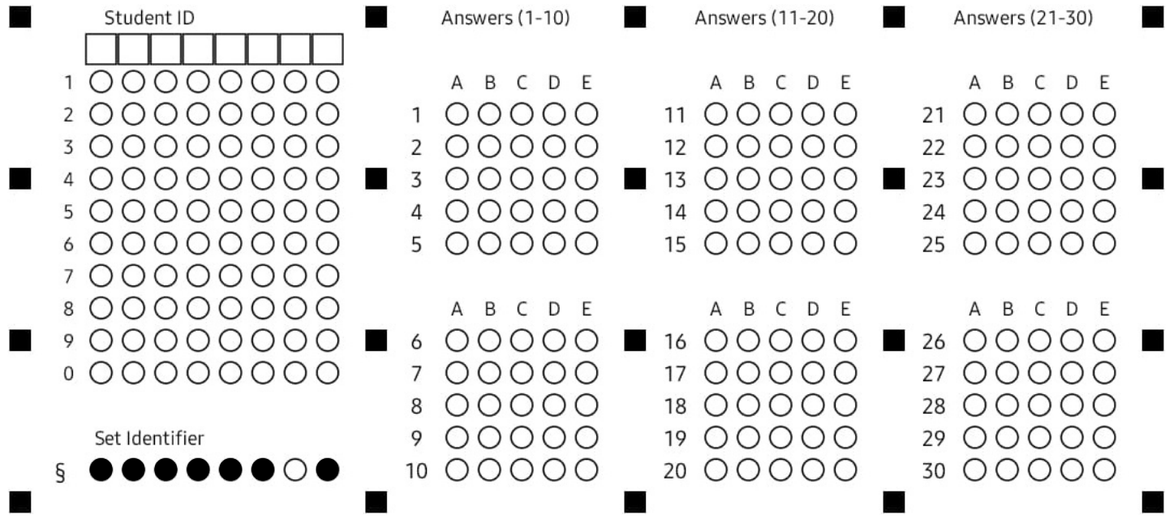
ID:	Name:

Brac University
Semester: Fall 2023
Course Code: CSE250
Circuits And Electronics
Section: 18
Faculty: SDS

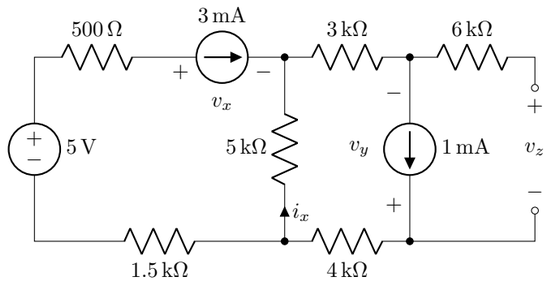
Set **B**

Assessment: *Class Assignment 1*
Duration: 1 hour 20 minutes
Date: September 28, 2023
Full Marks: 10

- ✓ No washroom breaks. Phones must be turned off. Using/carrying any notes during the exam is not allowed.
- ✓ All **4 questions** 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.



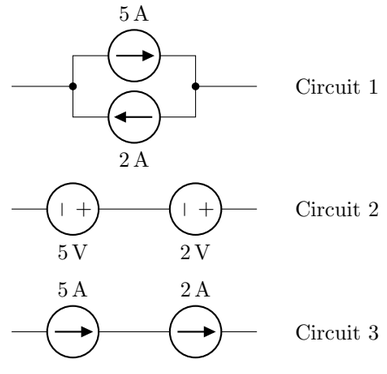
♢ Question 1 of 4 *[CO3] [2 marks]*



(A) c
(B) b
(C) **a**

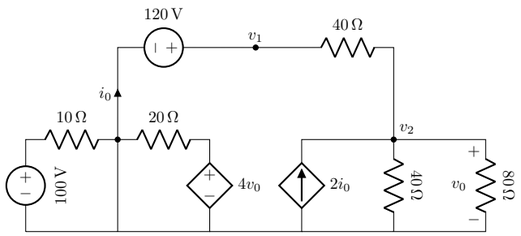
♢ Question 2 of 4 *[CO1] [2 marks]*

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



(A) Circuit 3 (B) Circuit 1 & 3 (C) **Circuit 1**
(D) Circuit 2 (E) None of the above

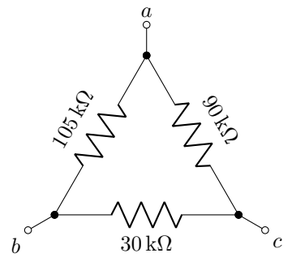
♢ Question 3 of 4 *[CO1] [1 mark]*



How many nodes are in this circuit?

(A) 6 (B) **5** (C) 3 (D) 4 (E) 7

♢ Question 4 of 4 *[CO3] [5 marks]*



Which of the following statements is true?

(A) $R_{ab} = 105\,\text{k}\Omega, R_{bc} = 30\,\text{k}\Omega, R_{ca} = 90\,\text{k}\Omega$

(B) $R_{ab} = 56\,\Omega, R_{bc} = 26\,\Omega, R_{ca} = 54\,\Omega$

(C) $\boldsymbol{R_{ab} = 56\,\text{k}\Omega, R_{bc} = 26\,\text{k}\Omega, R_{ca} = 54\,\text{k}\Omega}$

(D) $R_{ab} = R_{bc} = R_{ca} = 18.529\,\text{k}\Omega$

(E) None of the above

ID:	Name:

Brac University
Semester: Fall 2023
Course Code: CSE250
Circuits And Electronics
Section: 18
Faculty: SDS

Set **C**

Assessment: *Class Assignment 1*
Duration: 1 hour 20 minutes
Date: September 28, 2023
Full Marks: 10

- ✓ No washroom breaks. Phones must be turned off. Using/carrying any notes during the exam is not allowed.
- ✓ All **4 questions** 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

1 2 3 4 5 6 7 8 9 0

Set Identifier

§ ● ● ● ● ● ○ ○

Answers (1-10)

	A	B	C	D	E
1	○	○	○	○	○
2	○	○	○	○	○
3	○	○	○	○	○
4	○	○	○	○	○
5	○	○	○	○	○
6	○	○	○	○	○
7	○	○	○	○	○
8	○	○	○	○	○
9	○	○	○	○	○
10	○	○	○	○	○

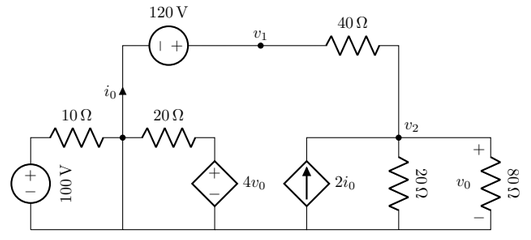
Answers (11-20)

	A	B	C	D	E
11	○	○	○	○	○
12	○	○	○	○	○
13	○	○	○	○	○
14	○	○	○	○	○
15	○	○	○	○	○
16	○	○	○	○	○
17	○	○	○	○	○
18	○	○	○	○	○
19	○	○	○	○	○
20	○	○	○	○	○

Answers (21-30)

	A	B	C	D	E
21	○	○	○	○	○
22	○	○	○	○	○
23	○	○	○	○	○
24	○	○	○	○	○
25	○	○	○	○	○
26	○	○	○	○	○
27	○	○	○	○	○
28	○	○	○	○	○
29	○	○	○	○	○
30	○	○	○	○	○

♢ Question 1 of 4 *[CO1] [1 mark]*

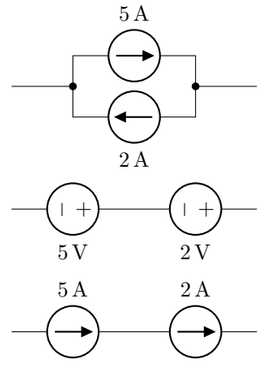


How many nodes are in this circuit?

(A) **5** (B) 4 (C) 7 (D) 6 (E) 3

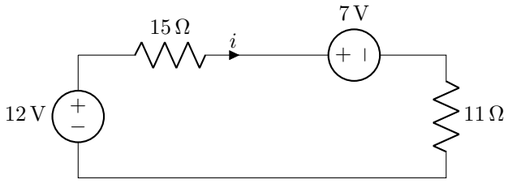
♢ Question 2 of 4 *[CO1] [2 marks]*

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



(A) Circuit 2 (B) **Circuit 1** (C) Circuit 3
(D) Circuit 1 & 3 (E) None of the above

♢ Question 3 of 4 *[CO3] [2 marks]*



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

(A) $-12 - 15i + 7 + 11i = 0$

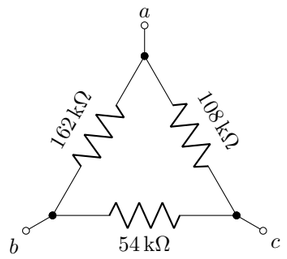
(B) $-12 + 15i - 7 + 11i = 0$

(C) **$-12 + 15i + 7 + 11i = 0$**

(D) $-12 - 15i - 7 + 11i = 0$

(E) None of the above

♢ Question 4 of 4 *[CO3] [5 marks]*



Which of the following statements is true?

(A) $R_{ab} = R_{bc} = R_{ca} = 29.455\,\text{k}\Omega$

(B) $R_{ab} = 81\,\Omega, R_{bc} = 45\,\Omega, R_{ca} = 72\,\Omega$

(C) $R_{ab} = 162\,\text{k}\Omega, R_{bc} = 54\,\text{k}\Omega, R_{ca} = 108\,\text{k}\Omega$

(D) **$R_{ab} = 81\,\text{k}\Omega, R_{bc} = 45\,\text{k}\Omega, R_{ca} = 72\,\text{k}\Omega$**

(E) None of the above

ID:	Name:

Brac University
Semester: Fall 2023
Course Code: CSE250
Circuits And Electronics
Section: 18
Faculty: SDS

Set **D**

Assessment: *Class Assignment 1*
Duration: 1 hour 20 minutes
Date: September 28, 2023
Full Marks: 10

- ✓ No washroom breaks. Phones must be turned off. Using/carrying any notes during the exam is not allowed.
- ✓ All **4 questions** 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

1 2 3 4 5 6 7 8 9 0

Set Identifier

§

Answers (1-10)

	A	B	C	D	E
1	○	○	○	○	○
2	○	○	○	○	○
3	○	○	○	○	○
4	○	○	○	○	○
5	○	○	○	○	○
6	○	○	○	○	○
7	○	○	○	○	○
8	○	○	○	○	○
9	○	○	○	○	○
10	○	○	○	○	○

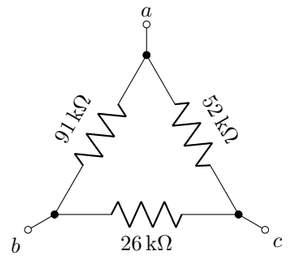
Answers (11-20)

	A	B	C	D	E
11	○	○	○	○	○
12	○	○	○	○	○
13	○	○	○	○	○
14	○	○	○	○	○
15	○	○	○	○	○
16	○	○	○	○	○
17	○	○	○	○	○
18	○	○	○	○	○
19	○	○	○	○	○
20	○	○	○	○	○

Answers (21-30)

	A	B	C	D	E
21	○	○	○	○	○
22	○	○	○	○	○
23	○	○	○	○	○
24	○	○	○	○	○
25	○	○	○	○	○
26	○	○	○	○	○
27	○	○	○	○	○
28	○	○	○	○	○
29	○	○	○	○	○
30	○	○	○	○	○

♢ Question 1 of 4 *[CO3] [5 marks]*



Which of the following statements is true?

(A) $R_{ab} = 91\,\text{k}\Omega, R_{bc} = 26\,\text{k}\Omega, R_{ca} = 52\,\text{k}\Omega$

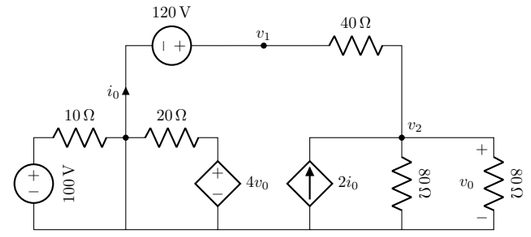
(B) $\boldsymbol{R_{ab} = 42\,\text{k}\Omega, R_{bc} = 22\,\text{k}\Omega, R_{ca} = 36\,\text{k}\Omega}$

(C) $R_{ab} = 42\,\Omega, R_{bc} = 22\,\Omega, R_{ca} = 36\,\Omega$

(D) $R_{ab} = R_{bc} = R_{ca} = 14.56\,\text{k}\Omega$

(E) None of the above

♢ Question 2 of 4 *[CO1] [1 mark]*

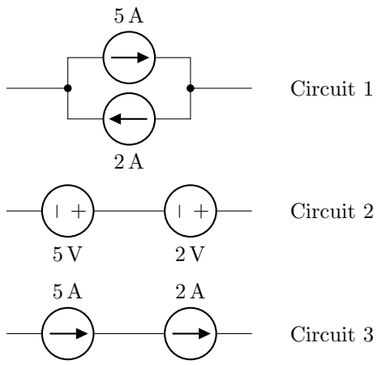


How many nodes are in this circuit?

(A) 3 (B) 7 (C) 4 (D) **5** (E) 6

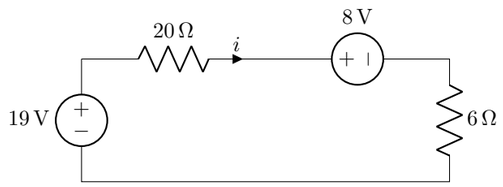
♢ Question 3 of 4 *[CO1] [2 marks]*

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 4 of 4 *[CO3] [2 marks]*



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

(A) $-19 + 20i + 8 + 6i = 0$
(B) $-19 - 20i - 8 + 6i = 0$
(C) $-19 - 20i + 8 + 6i = 0$
(D) $-19 + 20i - 8 + 6i = 0$
(E) None of the above

ID:	Name:

Brac University
Semester: Fall 2023
Course Code: CSE250
Circuits And Electronics
Section: 18
Faculty: SDS

Set **E**

Assessment: *Class Assignment 1*
Duration: 1 hour 20 minutes
Date: September 28, 2023
Full Marks: 10

- ✓ No washroom breaks. Phones must be turned off. Using/carrying any notes during the exam is not allowed.
- ✓ All **4 questions** 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

1 2 3 4 5 6 7 8 9 0

Set Identifier

§

Answers (1-10)

	A	B	C	D	E
1	○	○	○	○	○
2	○	○	○	○	○
3	○	○	○	○	○
4	○	○	○	○	○
5	○	○	○	○	○
6	○	○	○	○	○
7	○	○	○	○	○
8	○	○	○	○	○
9	○	○	○	○	○
10	○	○	○	○	○

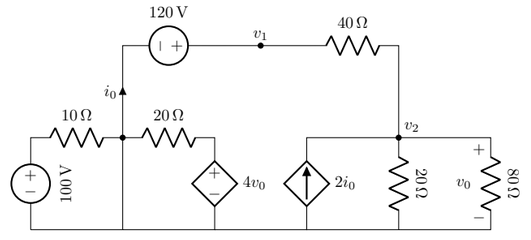
Answers (11-20)

	A	B	C	D	E
11	○	○	○	○	○
12	○	○	○	○	○
13	○	○	○	○	○
14	○	○	○	○	○
15	○	○	○	○	○
16	○	○	○	○	○
17	○	○	○	○	○
18	○	○	○	○	○
19	○	○	○	○	○
20	○	○	○	○	○

Answers (21-30)

	A	B	C	D	E
21	○	○	○	○	○
22	○	○	○	○	○
23	○	○	○	○	○
24	○	○	○	○	○
25	○	○	○	○	○
26	○	○	○	○	○
27	○	○	○	○	○
28	○	○	○	○	○
29	○	○	○	○	○
30	○	○	○	○	○

♢ Question 1 of 4 *[CO1] [1 mark]*

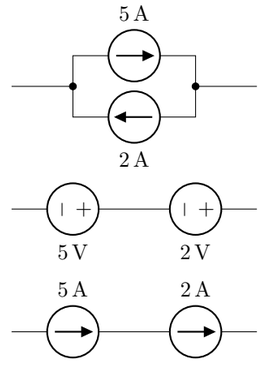


How many nodes are in this circuit?

(A) 4 (B) **5** (C) 6 (D) 3 (E) 7

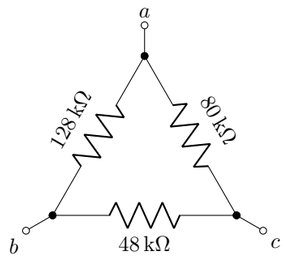
♢ Question 2 of 4 *[CO1] [2 marks]*

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



(A) **Circuit 1** (B) Circuit 3 (C) Circuit 1 & 3
(D) Circuit 2 (E) None of the above

♢ Question 3 of 4 *[CO3] [5 marks]*



Which of the following statements is true?

(A) $R_{ab} = 64\,\Omega, R_{bc} = 39\,\Omega, R_{ca} = 55\,\Omega$

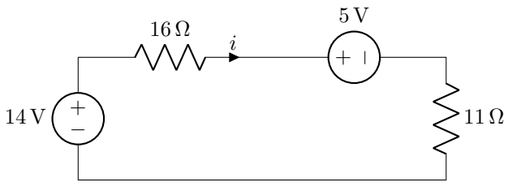
(B) $R_{ab} = 128\,\text{k}\Omega, R_{bc} = 48\,\text{k}\Omega, R_{ca} = 80\,\text{k}\Omega$

(C) $\boldsymbol{R_{ab} = 64\,\text{k}\Omega, R_{bc} = 39\,\text{k}\Omega, R_{ca} = 55\,\text{k}\Omega}$

(D) $R_{ab} = R_{bc} = R_{ca} = 24.304\,\text{k}\Omega$

(E) None of the above

♢ Question 4 of 4 *[CO3] [2 marks]*



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

(A) $-14 + 16i - 5 + 11i = 0$

(B) $-14 - 16i + 5 + 11i = 0$

(C) $\boldsymbol{-14 + 16i + 5 + 11i = 0}$

(D) $-14 - 16i - 5 + 11i = 0$

(E) None of the above

ID:	Name:

Brac University
Semester: Fall 2023
Course Code: CSE250
Circuits And Electronics
Section: 18
Faculty: SDS

Set **F**

Assessment: *Class Assignment 1*
Duration: 1 hour 20 minutes
Date: September 28, 2023
Full Marks: 10

- ✓ No washroom breaks. Phones must be turned off. Using/carrying any notes during the exam is not allowed.
- ✓ All **4 questions** 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

1 2 3 4 5 6 7 8 9 0

Set Identifier

§

Answers (1-10)

	A	B	C	D	E
1	○	○	○	○	○
2	○	○	○	○	○
3	○	○	○	○	○
4	○	○	○	○	○
5	○	○	○	○	○
6	○	○	○	○	○
7	○	○	○	○	○
8	○	○	○	○	○
9	○	○	○	○	○
10	○	○	○	○	○

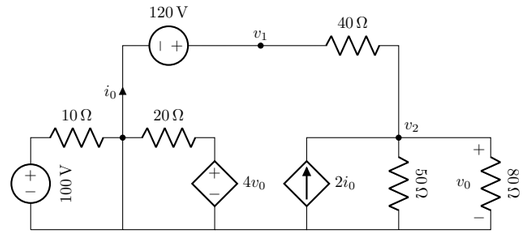
Answers (11-20)

	A	B	C	D	E
11	○	○	○	○	○
12	○	○	○	○	○
13	○	○	○	○	○
14	○	○	○	○	○
15	○	○	○	○	○
16	○	○	○	○	○
17	○	○	○	○	○
18	○	○	○	○	○
19	○	○	○	○	○
20	○	○	○	○	○

Answers (21-30)

	A	B	C	D	E
21	○	○	○	○	○
22	○	○	○	○	○
23	○	○	○	○	○
24	○	○	○	○	○
25	○	○	○	○	○
26	○	○	○	○	○
27	○	○	○	○	○
28	○	○	○	○	○
29	○	○	○	○	○
30	○	○	○	○	○

♢ Question 1 of 4 *[CO1] [1 mark]*

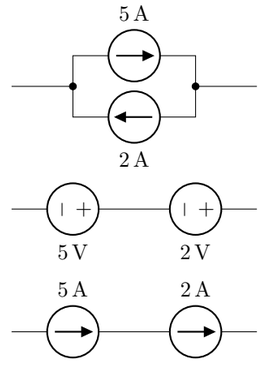


How many nodes are in this circuit?

(A) 5 (B) 6 (C) 7 (D) 4 (E) 3

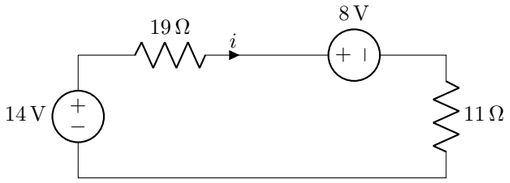
♢ Question 2 of 4 *[CO1] [2 marks]*

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



(A) Circuit 1 (B) Circuit 1 & 3 (C) Circuit 3
(D) Circuit 2 (E) None of the above

♢ Question 3 of 4 *[CO3] [2 marks]*



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

(A) $-14 - 19i + 8 + 11i = 0$

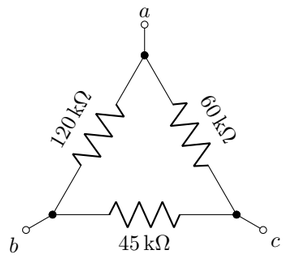
(B) $-14 + 19i - 8 + 11i = 0$

(C) $-14 - 19i - 8 + 11i = 0$

(D) $-14 + 19i + 8 + 11i = 0$

(E) None of the above

♢ Question 4 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) $R_{ab} = R_{bc} = R_{ca} = 21.176\,\text{k}\Omega$

(C) $R_{ab} = 120\,\text{k}\Omega, R_{bc} = 45\,\text{k}\Omega, R_{ca} = 60\,\text{k}\Omega$

(D) $R_{ab} = 56\,\Omega, R_{bc} = 36\,\Omega, R_{ca} = 44\,\Omega$

(E) None of the above

ID:	Name:

Brac University
Semester: Fall 2023
Course Code: CSE250
Circuits And Electronics
Section: 18
Faculty: SDS

Set G

Assessment: *Class Assignment 1*
Duration: 1 hour 20 minutes
Date: September 28, 2023
Full Marks: 10

- ✓ No washroom breaks. Phones must be turned off. Using/carrying any notes during the exam is not allowed.
- ✓ All **4 questions** 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

1 2 3 4 5 6 7 8 9 0

Set Identifier

§ ● ● ● ● ○ ○ ○

Answers (1-10)

	A	B	C	D	E
1	○	○	○	○	○
2	○	○	○	○	○
3	○	○	○	○	○
4	○	○	○	○	○
5	○	○	○	○	○
6	○	○	○	○	○
7	○	○	○	○	○
8	○	○	○	○	○
9	○	○	○	○	○
10	○	○	○	○	○

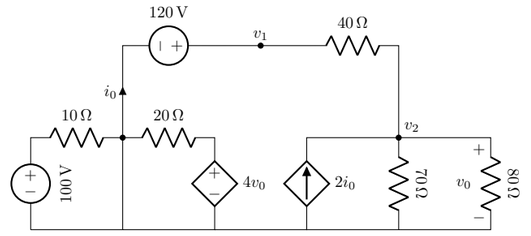
Answers (11-20)

	A	B	C	D	E
11	○	○	○	○	○
12	○	○	○	○	○
13	○	○	○	○	○
14	○	○	○	○	○
15	○	○	○	○	○
16	○	○	○	○	○
17	○	○	○	○	○
18	○	○	○	○	○
19	○	○	○	○	○
20	○	○	○	○	○

Answers (21-30)

	A	B	C	D	E
21	○	○	○	○	○
22	○	○	○	○	○
23	○	○	○	○	○
24	○	○	○	○	○
25	○	○	○	○	○
26	○	○	○	○	○
27	○	○	○	○	○
28	○	○	○	○	○
29	○	○	○	○	○
30	○	○	○	○	○

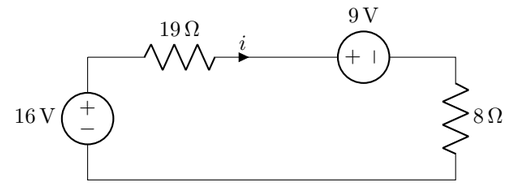
♢ Question 1 of 4 *[CO1] [1 mark]*



How many nodes are in this circuit?

(A) 7 (B) 4 (C) 3 **(D) 5** (E) 6

♢ Question 2 of 4 *[CO3] [2 marks]*



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

(A) $-16 - 19i - 9 + 8i = 0$

(B) $-16 + 19i - 9 + 8i = 0$

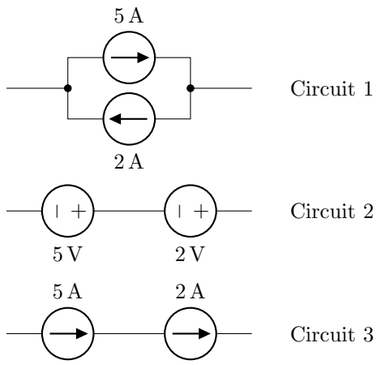
(C) $-16 - 19i + 9 + 8i = 0$

(D) $-16 + 19i + 9 + 8i = 0$

(E) None of the above

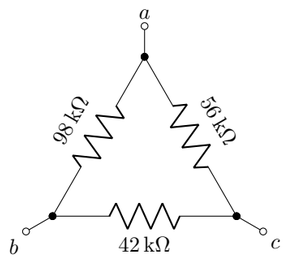
♢ Question 3 of 4 *[CO1] [2 marks]*

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 4 of 4 *[CO3] [5 marks]*



Which of the following statements is true?

(A) $R_{ab} = R_{bc} = R_{ca} = 19.279\,\text{k}\Omega$

(B) $R_{ab} = 49\,\Omega, R_{bc} = 33\,\Omega, R_{ca} = 40\,\Omega$

(C) $R_{ab} = 49\,\text{k}\Omega, R_{bc} = 33\,\text{k}\Omega, R_{ca} = 40\,\text{k}\Omega$

(D) $R_{ab} = 98\,\text{k}\Omega, R_{bc} = 42\,\text{k}\Omega, R_{ca} = 56\,\text{k}\Omega$

(E) None of the above

ID:	Name:

Brac University
Semester: Fall 2023
Course Code: CSE250
Circuits And Electronics
Section: 18
Faculty: SDS

Set **H**

Assessment: *Class Assignment 1*
Duration: 1 hour 20 minutes
Date: September 28, 2023
Full Marks: 10

- ✓ No washroom breaks. Phones must be turned off. Using/carrying any notes during the exam is not allowed.
- ✓ All **4 questions** 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

1 2 3 4 5 6 7 8 9 0

Set Identifier

§ ● ● ● ○ ● ● ●

Answers (1-10)

	A	B	C	D	E
1	○	○	○	○	○
2	○	○	○	○	○
3	○	○	○	○	○
4	○	○	○	○	○
5	○	○	○	○	○
6	○	○	○	○	○
7	○	○	○	○	○
8	○	○	○	○	○
9	○	○	○	○	○
10	○	○	○	○	○

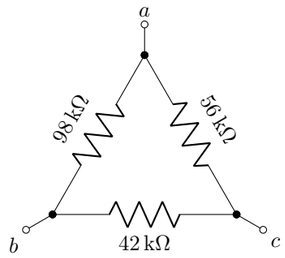
Answers (11-20)

	A	B	C	D	E
11	○	○	○	○	○
12	○	○	○	○	○
13	○	○	○	○	○
14	○	○	○	○	○
15	○	○	○	○	○
16	○	○	○	○	○
17	○	○	○	○	○
18	○	○	○	○	○
19	○	○	○	○	○
20	○	○	○	○	○

Answers (21-30)

	A	B	C	D	E
21	○	○	○	○	○
22	○	○	○	○	○
23	○	○	○	○	○
24	○	○	○	○	○
25	○	○	○	○	○
26	○	○	○	○	○
27	○	○	○	○	○
28	○	○	○	○	○
29	○	○	○	○	○
30	○	○	○	○	○

♢ Question 1 of 4 *[CO3] [5 marks]*



Which of the following statements is true?

(A) $R_{ab} = R_{bc} = R_{ca} = 19.279\,\text{k}\Omega$

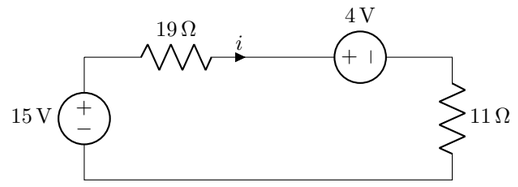
(B) $\boldsymbol{R_{ab} = 49\,\text{k}\Omega, R_{bc} = 33\,\text{k}\Omega, R_{ca} = 40\,\text{k}\Omega}$

(C) $R_{ab} = 49\,\Omega, R_{bc} = 33\,\Omega, R_{ca} = 40\,\Omega$

(D) $R_{ab} = 98\,\text{k}\Omega, R_{bc} = 42\,\text{k}\Omega, R_{ca} = 56\,\text{k}\Omega$

(E) None of the above

♢ Question 2 of 4 *[CO3] [2 marks]*



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

(A) $-15 - 19i + 4 + 11i = 0$

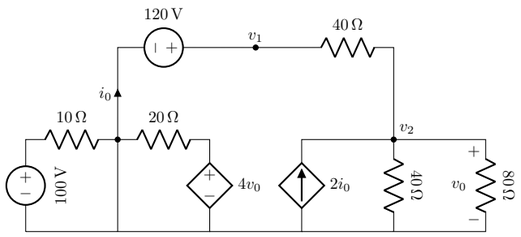
(B) $-15 - 19i - 4 + 11i = 0$

(C) $\boldsymbol{-15 + 19i + 4 + 11i = 0}$

(D) $-15 + 19i - 4 + 11i = 0$

(E) None of the above

♢ Question 3 of 4 *[CO1] [1 mark]*

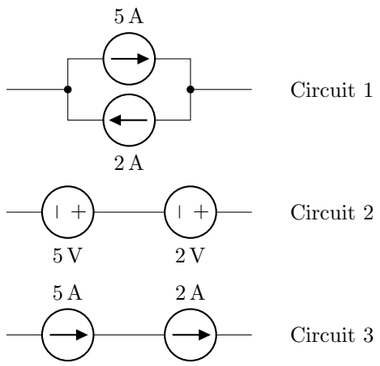


How many nodes are in this circuit?

A **5** B 4 C 3 D 6 E 7

♢ Question 4 of 4 *[CO1] [2 marks]*

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



A **Circuit 1** B Circuit 1 & 3 C Circuit 2
D Circuit 3 E None of the above

ID:	Name:

Brac University
Semester: Fall 2023
Course Code: CSE250
Circuits And Electronics
Section: 18
Faculty: SDS

Set I

Assessment: *Class Assignment 1*
Duration: 1 hour 20 minutes
Date: September 28, 2023
Full Marks: 10

- ✓ No washroom breaks. Phones must be turned off. Using/carrying any notes during the exam is not allowed.
- ✓ All **4 questions** 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

1 2 3 4 5 6 7 8 9 0

Set Identifier

§

Answers (1-10)

	A	B	C	D	E
1	○	○	○	○	○
2	○	○	○	○	○
3	○	○	○	○	○
4	○	○	○	○	○
5	○	○	○	○	○
6	○	○	○	○	○
7	○	○	○	○	○
8	○	○	○	○	○
9	○	○	○	○	○
10	○	○	○	○	○

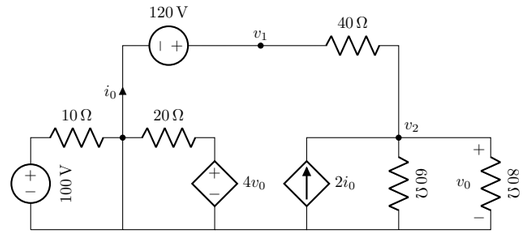
Answers (11-20)

	A	B	C	D	E
11	○	○	○	○	○
12	○	○	○	○	○
13	○	○	○	○	○
14	○	○	○	○	○
15	○	○	○	○	○
16	○	○	○	○	○
17	○	○	○	○	○
18	○	○	○	○	○
19	○	○	○	○	○
20	○	○	○	○	○

Answers (21-30)

	A	B	C	D	E
21	○	○	○	○	○
22	○	○	○	○	○
23	○	○	○	○	○
24	○	○	○	○	○
25	○	○	○	○	○
26	○	○	○	○	○
27	○	○	○	○	○
28	○	○	○	○	○
29	○	○	○	○	○
30	○	○	○	○	○

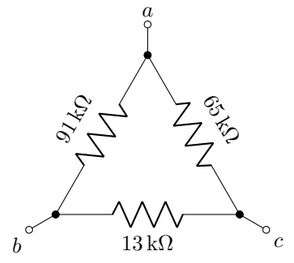
♢ Question 1 of 4 *[CO1] [1 mark]*



How many nodes are in this circuit?

(A) 6 (B) 4 (C) 3 **(D) 5** (E) 7

♢ Question 2 of 4 *[CO3] [5 marks]*



Which of the following statements is true?

(A) $R_{ab} = 42\,\Omega, R_{bc} = 12\,\Omega, R_{ca} = 40\,\Omega$

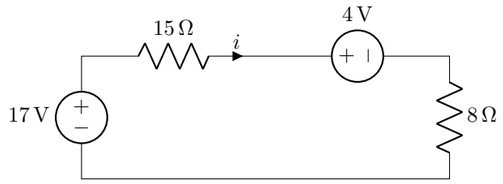
(B) $R_{ab} = R_{bc} = R_{ca} = 9.681\,\text{k}\Omega$

(C) $\boldsymbol{R_{ab} = 42\,\text{k}\Omega, R_{bc} = 12\,\text{k}\Omega, R_{ca} = 40\,\text{k}\Omega}$

(D) $R_{ab} = 91\,\text{k}\Omega, R_{bc} = 13\,\text{k}\Omega, R_{ca} = 65\,\text{k}\Omega$

(E) None of the above

♢ Question 3 of 4 *[CO3] [2 marks]*



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

(A) $-17 - 15i - 4 + 8i = 0$

(B) $-17 - 15i + 4 + 8i = 0$

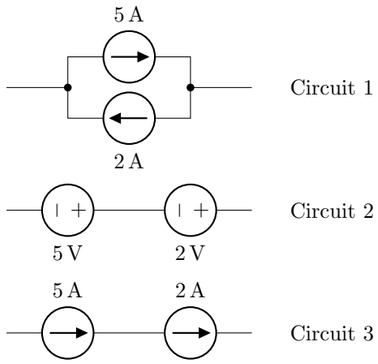
(C) $-17 + 15i - 4 + 8i = 0$

(D) $-17 + 15i + 4 + 8i = 0$

(E) None of the above

♢ Question 4 of 4 *[CO1] [2 marks]*

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



(A) Circuit 1 & 3 (B) Circuit 2 **(C) Circuit 1**

(D) Circuit 3 (E) None of the above

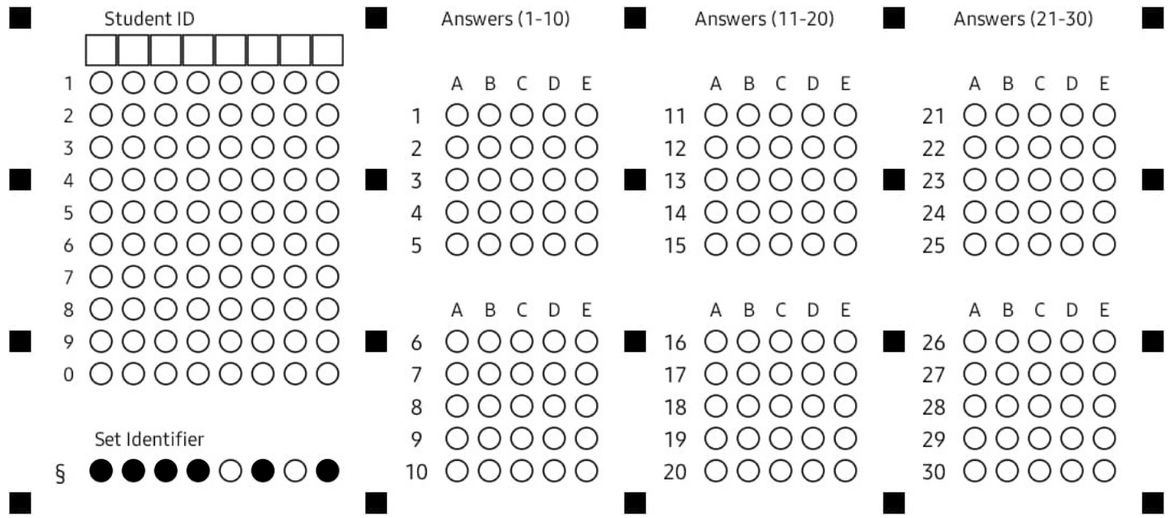
ID:	Name:

Brac University
Semester: Fall 2023
Course Code: CSE250
Circuits And Electronics
Section: 18
Faculty: SDS

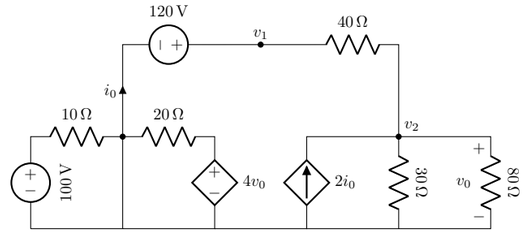
Set **J**

Assessment: *Class Assignment 1*
Duration: 1 hour 20 minutes
Date: September 28, 2023
Full Marks: 10

- ✓ No washroom breaks. Phones must be turned off. Using/carrying any notes during the exam is not allowed.
- ✓ All **4 questions** 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.



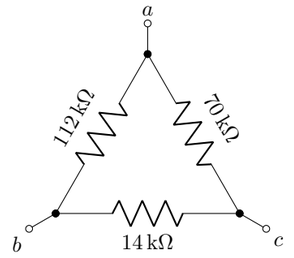
◇ Question 1 of 4 *[CO1] [1 mark]*



How many nodes are in this circuit?

(A) 3 (B) 4 (C) 6 (D) 7 **(E) 5**

◇ Question 2 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) $R_{ab} = 48\,\text{k}\Omega, R_{bc} = 13\,\text{k}\Omega, R_{ca} = 45\,\text{k}\Omega$

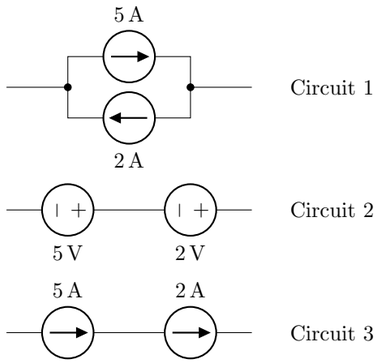
(C) $R_{ab} = R_{bc} = R_{ca} = 10.566\,\text{k}\Omega$

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

(E) None of the above

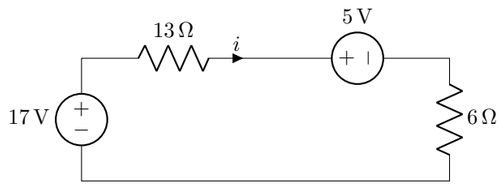
♢ Question 3 of 4 *[CO1] [2 marks]*

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



(A) Circuit 2 (B) Circuit 3 (C) Circuit 1 & 3
(D) Circuit 1 (E) None of the above

♢ Question 4 of 4 *[CO3] [2 marks]*



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

(A) $-17 + 13i - 5 + 6i = 0$
(B) $-17 - 13i + 5 + 6i = 0$
(C) $-17 - 13i - 5 + 6i = 0$
(D) $-17 + 13i + 5 + 6i = 0$
(E) None of the above