Name:

ID:

Assignment-01

(Submission due : 22 Sep 2023 )

Q1. The current-vo

**voltage**.

characteristics

of

a circuit element is given

below. Identify whether it is Actre or Passive element.

I

I

(c)

(a)

-V ←

-V<

TH

I

(b)

V

-V←

(d)

I

>V

→V

-V<

V

10

O

-I

(*e)*

I

-V

О

-I

(f)

तर

не

I

→V

Q2.

law (KVL) to

law (KVL) to find the values

Apply Kirchoff's voltage I and voltage drops V, and V2

I

V1 and V2

21

V2 in the ckt. **below**.

**16V**

**+**

V1

4I

123422

of current

Q3. Apply Kirchoff's current law (KCL) to find the values

-2

I, and Ig in the

current shown.

I,

of

current

ckt. below. Comment on the direction of

Iz

24 ↑

Q4. Apply KCL to find

31

45,

252

the value of V in the ckt. shown **below**

+

152

6A ↑

2V

+

5V

Q5.

Convert a

given voltage

source into equivalent current source

201

52

B

Q6.

Calculate the direction and

resistor. [Hint: You

convert

may

**One**

magnitude of avrent flowing **through** 52

current source to other.)

૧.

55

**ww**

+

201

4523

213

**1A**

Q7. Use

superposition

sition theorem to determine the current I shown in the ckt. below.

Ө lov

120A

35052

1505

40A

I

Q8. Calculate the total power **delivered** to the 1052 resistor in the ckt.

Use superposition

theorem.

52

ΙΩ

1022

15λ

↑

4A

2V