22 Lecture - PHY301

Important Mcqs

Which of the following is true about source transformation?

A. It is used to replace a resistance with an equivalent source.

B. It is used to replace a voltage source with an equivalent current source.

C. It is used to replace a current source with an equivalent voltage source.

D. It is used to replace a capacitor with an equivalent inductor.

Answer: B

What is the equivalent current source for a voltage source of 20V and resistance of 5??

A. 5A

B. 2A

C. 4A

D. 10A

Answer: B

What is the equivalent voltage source for a current source of 3A and resistance of 2??

A. 6V

B. 1.5V

C. 5V

D. 7V

Answer: A

When should source transformation be used in circuit analysis?

A. When there are only voltage sources in the circuit.

B. When there are only current sources in the circuit.

C. When there are both voltage and current sources in the circuit.

D. When there are capacitors and inductors in the circuit.

Answer: C

What is the equation for calculating the current through a voltage source?

A. I = V/R

B. V = I*R

C. R = V/I

D. I = R/V

Answer: A

What is the equation for calculating the voltage drop across a resistance?

A. I = V/R

B. V = I*R

C. R = V/I

D. I = R/V

Answer: B

What is the equivalent current source for a voltage source of 12V and resistance of 6??

A. 2A

B. 1.5A

C. 4A

D. 3A

Answer: A

What is the equivalent voltage source for a current source of 5A and resistance of 3??

A. 15V

B. 8V

C. 3V

D. 1.5V

Answer: A

Which of the following is not an advantage of using source transformation in circuit analysis?

A. It simplifies the circuit.

B. It reduces the number of different types of sources in the circuit.

C. It makes analysis easier.

D. It increases the complexity of the circuit.

Answer: D

What is the purpose of source transformation?

A. To replace a resistance with an equivalent source.

B. To replace a voltage source with an equivalent current source.

C. To replace a current source with an equivalent voltage source.

D. To replace an inductor with an equivalent capacitor.

Answer: B