

Name _____

TRUE/FALSE. Write 'T' if the statement is true and 'F' if the statement is false.

1) The unit of measurement for conductance is the Coulomb.

Answer: True ☒ False

2) Kilo equals 1,000 times the base unit.

Answer: ☒ True False

3) Inductors store energy in an electrostatic field.

Answer: True ☒ False

4) An electronic device which stores an electric charge is known as an inductor.

Answer: True ☒ False

5) The symbol μ is an abbreviation for 10^{-6} or micro.

Answer: ☒ True False

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

6) Which of the following are common applications of electronics?

- A) Automation
- B) Computers
- C) Communications systems
- D) Consumer products
- E) All of the above

Answer: E

7) The symbol for Current is:

- A) V
- B) C
- C) A
- D) I

Answer: D

8) The unit of measurement for current is the:

- A) Ohm
- B) Watt
- C) Volt
- D) Ampere

Answer: D

9) The symbol for voltage is:

- A) C
- B) V
- C) R
- D) A

Answer: B

10) The unit of measurement for voltage is the:

- A) Watt
- B) Ampere
- C) Volt
- D) Ohm D

Answer: C

11) The symbol for a resistor is:

- A) R
- B) V
- C) A
- D) C

Answer: A

12) The shortcut symbol for Ohms is:

A) Ω

B) .

C) α

D) δ

Answer: A

13) The unit of measurement for resistance is the:

A) Volt

B) Ohm

C) Ampere

D) Watt

Answer: B

14) Which of the following metric prefixes is NOT commonly used in electronics work?

A) pico

B) micro

C) kilo

D) milli

E) tera

Answer: E

15) Express the number 10,000 in proper scientific notation.

A) 1.0×10^4

B) 1.0×10^3

C) 10.0×10^3

D) 100.0×10^2

Answer: A

16) Convert 4.7 mA to amperes.

A) 0.0047 A

B) 47,000 A

C) 4,700 A

D) 0.00047 A

Answer: A

17) Convert 120 mW to W.

A) 0.00012 W

B) 0.12 W

C) 1,200 W

D) 120,000 W

Answer: B

18) Convert 10,000 ohms to k Ω .

A) 10 k Ω

B) 1 k Ω

C) 100 k Ω

D) 1000 k Ω

Answer: A

19) Convert 75 μ V to mV.

A) 0.075 mV

B) 0.000075 mV

C) 7500 mV

D) 75,000 mV

Answer: A

20) Convert 5.7 mW to μ W.

A) 5,700 μ W

B) 57,000 μ W

C) 0.057 μ W

D) 0.00057 μ W

Answer: A

21) Convert 6.8×10^{-5} W to the closest standard metric prefix.

A) 0.68 μ W

B) 68 μ W

C) 680 μ W

D) 6.8 μ W

Answer: B

22) Convert 3.95×10^{-4} A to the closest standard metric prefix.

A) 39.5 mA

B) 3.95 mA

C) 0.395 mA

D) 395 mA

Answer: C

Convert the following:

23) 2×10^{-3} Amp = _____

A) 2 amps

B) 2 microamps

C) 2 milliamps

D) 0.5 milliamps

Answer: C

- 24) $4.7 \text{ k}\Omega =$ _____
 A) $4.7 \times 10^{-4} \Omega$ B) $4.7 \times 10^{-3} \Omega$ C) $4.7 \times 10^3 \Omega$ D) $47 \times 10^{-3} \Omega$
 Answer: C
- 25) $3.9 \text{ k}\Omega =$ _____
 A) $3.9 \times 10^5 \Omega$ B) $3.9 \times 10^3 \Omega$ C) $3.9 \times 10^{-4} \Omega$ D) $39 \times 10^{-3} \Omega$
 Answer: B
- 26) 980 microvolts = _____
 A) $980 \times 10^{-3} \text{ V}$
 B) $98 \times 10^3 \text{ V}$
 C) 9.80 millivolts
 D) both A and C
 E) none of the above
 Answer: E
- 27) $2.2 \text{ kV} =$ _____
 A) $2.2 \times 10^{-3} \text{ V}$ B) $2.2 \times 10^{-4} \text{ V}$ C) $22 \times 10^3 \text{ V}$ D) 2,200 Volts
 Answer: D
- 28) Siemens is a unit for:
 A) power B) resistance C) conductance D) voltage
 Answer: C
- 29) The shorthand method that uses a base number between 1 and 10 is called:
 A) decimal B) scientific notation
 C) engineering notation D) prefix
 Answer: B
- 30) The symbol for power is:
 A) W B) P C) Q D) Z
 Answer: B
- 31) Express $0.004730 =$ _____, _____.
 A) 4.73×10^{-6} , 4.73 micro B) 473×10^3 , .473 milli
 C) 4.73×10^{-3} , 4.73 milli D) 473×10^{-3} , 4.73 milli
 Answer: C
- 32) Express 5.6×10^{-2} in milli, basic units, and micro.
 A) 56 milli, 0.056, 56000 micro B) 5.6 milli, 0.056, 56000 micro
 C) 5600 milli, 56, 560 pico D) 560 milli, 5.600, 5600 micro
 Answer: A
- 33) Multiply $(99.2 \times 10^{-6})(48 \times 10^1) =$ _____, _____.
 A) 476×10^{-3} , 47.6 micro B) 4.76×10^{-2} , 47.6 nano
 C) 4.76×10^{-2} , 47.6 milli D) 4.76×10^{-4} , 47.6 milli
 Answer: C

34) Add $(430 \times 10^6) + (9.75 \times 10^8) = \underline{\hspace{2cm}}, \underline{\hspace{2cm}}$.

- A) 1.4×10^9 , 1.4 Giga
- C) 1.4×10^9 , 1.4 Mega

- B) 14×10^9 , 1.4 Giga
- D) 14×10^9 , 1.4 Giga

Answer: A

35) Subtract $(3462 \times 10^0) - (2.22 \times 10^2) = \underline{\hspace{2cm}}, \underline{\hspace{2cm}}$.

- A) 3.24×10^2 , 3.24 kilo
- C) 3.24×10^4 , 3.24 kilo

- B) 3.24×10^3 , 3.24 milli
- D) 3.24×10^3 , 3.24 kilo

Answer: D

36) Divide $\frac{(65 \times 10^{-3})}{(2.3 \times 10^2)} =$

- A) 2.83×10^{-3} , 283 micro
- C) 2.83×10^{-5} , 283 micro

- B) 2.83×10^{-2} , 283 micro
- D) 2.83×10^{-4} , 283 micro

Answer: D

37) Convert 4,600,000 Ω to Mega Ω .

- A) 46 Mega Ω

- B) 4600 Mega Ω

- C) 460 Mega Ω

- D) 4.6 Mega Ω

Answer: D

38) 2 $\mu\text{F} = \underline{\hspace{2cm}}$

- A) $2 \times 10^{-6} \text{ F}$

- B) 200 pF

- C) 2000 nF

- D) both A and C

Answer: D

39) Express the number 51,000,000,000 in proper scientific notation.

- A) 51×10^8

- B) 5.1×10^{10}

- C) 5.1×10^9

- D) 5.1×10^{11}

Answer: B

40) The SI system is :

- A) used for scientific work
- B) based on a system of fundamental units
- C) used for engineering work
- D) an international system
- E) all of the above

Answer: E