**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.

1)

\_\_\_\_\_\_\_

2)

Kilo equals 1,000 times the base unit.

2)

\_\_\_\_\_\_\_

3)

Inductors store energy in an electrostatic field.

3)

\_\_\_\_\_\_\_

4)

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

4)

\_\_\_\_\_\_\_

5)

The symbol μ is an abbreviation for 10-6 or micro.

5)

\_\_\_\_\_\_\_

**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?

6)

\_\_\_\_\_\_\_

A)

Computers

B)

Automation

C)

Communications systems

D)

Consumer products

E)

All of the above

7)

The symbol for Current is:

7)

\_\_\_\_\_\_\_

A)

**I**

B)

**A**

C)

**V**

D)

**C**

8)

The unit of measurement for current is the:

8)

\_\_\_\_\_\_\_

A)

Volt

B)

Ohm

C)

Ampere

D)

Watt

9)

The symbol for voltage is:

9)

\_\_\_\_\_\_\_

A)

**C**

B)

**A**

C)

**R**

D)

**V**

10)

The unit of measurement for voltage is the:

10)

\_\_\_\_\_\_

A)

Volt

B)

Ampere

C)

Ohm D

D)

Watt

11)

The symbol for a resistor is:

11)

\_\_\_\_\_\_

A)

**A**

B)

**V**

C)

**C**

D)

**R**

12)

The shortcut symbol for Ohms is:

12)

\_\_\_\_\_\_

A)

Ω

B)

α

C)

δ

D)

.

13)

The unit of measurement for resistance is the:

13)

\_\_\_\_\_\_

A)

Watt

B)

Ampere

C)

Volt

D)

Ohm

14)

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

14)

\_\_\_\_\_\_

A)

tera

B)

micro

C)

milli

D)

kilo

E)

pico

15)

Express the number 10,000 in proper scientific notation.

15)

\_\_\_\_\_\_

A)

10.0 × 103

B)

1.0 × 104

C)

100.0 × 102

D)

1.0 × 103

16)

Convert 4.7 mA to amperes.

16)

\_\_\_\_\_\_

A)

47,000 A

B)

0.0047 A

C)

4,700 A

D)

0.00047 A

17)

Convert 120 mW to W.

17)

\_\_\_\_\_\_

A)

1,200 W

B)

0.00012 W

C)

120,000 W

D)

0.12 W

18)

Convert 10,000 ohms to kΩ.

18)

\_\_\_\_\_\_

A)

100 kΩ

B)

1 kΩ

C)

1000 kΩ

D)

10 kΩ

19)

Convert 75 μV to mV.

19)

\_\_\_\_\_\_

A)

75,000 mV

B)

0.000075 mV

C)

0.075 mV

D)

7500 mV

20)

Convert 5.7 mW to μW.

20)

\_\_\_\_\_\_

A)

0.00057 μW

B)

57,000 μW

C)

0.057 μW

D)

5,700 μW

21)

Convert 6.8 × 10-5 W to the closest standard metric prefix.

21)

\_\_\_\_\_\_

A)

6.8 μW

B)

68 μW

C)

0.68 μW

D)

680 μW

22)

Convert 3.95 × 10-4 A to the closest standard metric prefix.

22)

\_\_\_\_\_\_

A)

0.395 mA

B)

395 mA

C)

39.5 mA

D)

3.95 mA

**Convert the following:**

23)

2 × 10-3 Amp = \_\_\_\_\_\_\_\_

23)

\_\_\_\_\_\_

A)

0.5 milliamps

B)

2 amps

C)

2 milliamps

D)

2 microamps

24)

4.7 kΩ = \_\_\_\_\_\_\_\_

24)

\_\_\_\_\_\_

A)

4.7 × 10-3 Ω

B)

4.7 × 103 Ω

C)

4.7 × 10-4 Ω

D)

47 × 10-3 Ω

25)

3.9 kΩ = \_\_\_\_\_\_\_\_

25)

\_\_\_\_\_\_

A)

3.9 × 10-4 Ω

B)

3.9 × 105 Ω

C)

39 × 10-3 Ω

D)

3.9 × 103 Ω

26)

980 microvolts = \_\_\_\_\_\_\_\_

26)

\_\_\_\_\_\_

A)

980 × 10-3 V

B)

98 × 103 V

C)

9.80 millivolts

D)

both A and C

E)

none of the above

27)

2.2 kV = \_\_\_\_\_\_\_\_

27)

\_\_\_\_\_\_

A)

2.2 × 10-3 V

B)

2.2 × 10-4 V

C)

2,200 Volts

D)

22 × 103 V

28)

Siemens is a unit for:

28)

\_\_\_\_\_\_

A)

conductance

B)

power

C)

voltage

D)

resistance

29)

The shorthand method that uses a base number between 1 and 10 is called:

29)

\_\_\_\_\_\_

A)

prefix

B)

engineering notation

C)

scientific notation

D)

decimal

30)

The symbol for power is:

30)

\_\_\_\_\_\_

A)

**Z**

B)

**P**

C)

**W**

D)

**Q**

31)

Express 0.004730 = \_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_.

31)

\_\_\_\_\_\_

A)

4.73 × 10-6, 4.73 micro

B)

4.73 × 10-3, 4.73 milli

C)

*M*473 × 103, .473 milli

D)

473 × 10-3, 4.73 milli

32)

Express 5.6 × 10-2 in milli, basic units, and micro.

32)

\_\_\_\_\_\_

A)

5600 milli, 56, 560 pico

B)

56 milli, 0.056, 56000 micro

C)

5.6 milli, 0.056, 56000 micro

D)

560 milli, 5.600, 5600 micro

33)

Multiply (99.2 × 10-6)(48 × 101) = \_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_.

33)

\_\_\_\_\_\_

A)

4.76 × 10-2, 47.6 milli

B)

4.76 × 10-4, 47.6 milli

C)

476 × 10-3, 47.6 micro

D)

4.76 × 10-2, 47.6 nano

34)

Add (430 × 106) + (9.75 × 108) = \_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_.

34)

\_\_\_\_\_\_

A)

14 × 109, 1.4 Giga

B)

1.4 × 109, 1.4 Mega

C)

14 × 109, 1.4 Giga

D)

1.4 × 109, 1.4 Giga

35)

Subtract (3462 × 100) - (2.22 × 102) = \_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_.

35)

\_\_\_\_\_\_

A)

3.24 × 103, 3.24 milli

B)

3.24 × 103, 3.24 kilo

C)

3.24 × 104, 3.24 kilo

D)

3.24 × 102, 3.24 kilo

36)

Divide ** =

36)

\_\_\_\_\_\_

A)

2.83 × 10-3, 283 micro

B)

2.83 × 10-2, 283 micro

C)

2.83 × 10-5, 283 micro

D)

2.83 × 10-4, 283 micro

37)

Convert 4,600,000 Ω to Mega Ω.

37)

\_\_\_\_\_\_

A)

4.6 Mega Ω

B)

46 Mega Ω

C)

460 Mega Ω

D)

4600 Mega Ω

38)

2 μF = \_\_\_\_\_\_\_\_

38)

\_\_\_\_\_\_

A)

2000 nF

B)

200 pF

C)

2 × 10-6 F

D)

both A and C

39)

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

39)

\_\_\_\_\_\_

A)

5.1 × 1011

B)

5.1 × 1010

C)

5.1 × 109

D)

51 × 108

40)

The SI system is :

40)

\_\_\_\_\_\_

A)

used for scientific work

B)

used for engineering work

C)

an international system

D)

based on a system of fundamental units

E)

all of the above

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

41)

The smallest particle of an element that still retains the characteristics of the element is called an atom.

41)

\_\_\_\_\_\_

42)

Electrons are negatively charged particles, and are contained in the nucleus of the atom.

42)

\_\_\_\_\_\_

43)

In the neutral state all atoms contain the same number of protons and electrons.

43)

\_\_\_\_\_\_

44)

The outermost shell of an atom is called the *valence* shell.

44)

\_\_\_\_\_\_

45)

The copper atom contains 29 free electrons.

45)

\_\_\_\_\_\_

46)

The nucleus contains protons and electrons, each with an opposite charge.

46)

\_\_\_\_\_\_