Exam

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 kΩ.
A) 10 kΩ B) 1 kΩ C) 100 kΩ D) 1000 kΩ
Answer: A

19) Convert 75 µV 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 µW.
A) 5,700 µW B) 57,000 µW C) 0.057 µW D) 0.00057 µW
Answer: A

21) Convert 6.8×10^{-5} W to the closest standard metric prefix.
A) 0.68 µW B) 68 µW C) 680 µW D) 6.8 µW
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 kΩ = _____

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 kΩ = _____

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) 980×10^{-3} V
B) 98×10^{3} V
C) 9.80 millivolts
D) both A and C
E) none of the above

Answer: E

27) 2.2 kV = _____

A) 2.2×10^{-3} V B) 2.2×10^{-4} V C) 22×10^{3} 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) $M473 \times 10^{3}$, .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 $(430 \times 10^6) + (9.75 \times 10^8)$ = _____, _____.

A) 1.4×10^9, 1.4 Giga
B) 14×10^9, 1.4 Giga
C) 1.4×10^9, 1.4 Mega
D) 14×10^9, 1.4 Giga

Answer: A

35) Subtract $(3462 \times 10^0) - (2.22 \times 10^2)$ = _____, _____.

A) 3.24×10^2, 3.24 kilo
B) 3.24×10^3, 3.24 milli
C) 3.24×10^4, 3.24 kilo
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
B) 2.83×10^{-2}, 283 micro
C) 2.83×10^{-5}, 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 μF = _____

A) 2×10^{-6} 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