Time left 0:58:20

Question 1

Answer saved

Marked out of 1.00

Flag question

In energy measurement, the electrolytic meter only applies in case of alternating current (AC) supply.

Select one:

- True
- False

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Next page

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Time left 0:58:07

Question 2

Answer saved

Marked out of 1.00

Flag question

I am a measuring instrument; I am very costly and I am capable of measuring the energy loss from hot or cold insulated areas. My application is very useful in the electric power distribution industry, where technicians may inspect power line insulators and other objects at elevated potential for "hot spots" without having to make physical contact with those objects. *Who am I?*

- a. Resistance thermometer
- b. Electronic thermometer
- c. Combustion analyzer
- d. Hot electron bolometer
- e. Thermal imager

Clear my choice

Time left 0:57:56

Question 3

Answer saved

Marked out of 1.00

Flag question

The following are popular airflow monitors except_____.

- a. combustion analyzers
- b. airflow hoods
- c. anemometers
- d. pitot tubes
- e. velometers

Clear my choice

Previous page

Compiled by Warrior - Uhall

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Time left 0:57:31

Question 4

Answer saved

Marked out of 1.00

Flag question

The electric power of the electrical bulb is 60 watts. How much time is needed for the electric bulb to perform the work of 240 joules.

- a. 0.5 seconds
- b. 3 seconds
- c. 4 hours
- d. 4 seconds
- e. 3 hours

Clear my choice

Previous page

Next page

Time left 0:56:56

Question 5

Answer saved

Marked out of 1.00

Flag question

The real power (P) is 400 W and the phase angle (f) between voltage and current is 30°, calculate the apparent power (S).

- a. 20 VA
- b. 2593 VA
- c. 13.33 VA
- d. 5000 VA
- e. 2000 VA

Clear my choice

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Time left 0:55:07

Question 6

Answer saved

Marked out of 1.00

Flag question

A moving coil galvanometer has a coil of resistance 50 Ω. It shows a full-scale deflection for a current of 40 mA. If it works as an ammeter having a range of 0 to 4 A, calculate the shunt resistance?

- a. 20 *ohm*
- b. 0.1 *ohm*
- c. 2 *ohm*
- d. 1 *ohm*
- e. 0.50 *ohm*

Clear my choice

Time left 0:54:52

Question 7

Answer saved

Marked out of 1.00

Flag question

Electrolytic meters measure electric quantity directly and electric energy only indirectly, on the assumption that the pressure of the supply varies.

Select one:

- True
- False

Previous page

Next page

Compiled by Warrior - Uhall

Time left 0:54:41

Question 8

Answer saved

Marked out of 1.00

Flag question

A galvanometer can be converted into an ammeter by connecting a high resistance in parallel with the galvanometer.

Select one:

- True
- False

Previous page

Next page

Time left 0:54:35

Question 9

Answer saved

Marked out of 1.00

Flag question

Five researchers conducted experiments in the electrical and electronic laboratory, using the different experimental setups, different instruments at different locations, under different environmental conditions, and obtained the following set of data: 20.38, 20.37, 20.36, 20.33, 20.32. Which of the following sets of performance characteristics clearly describes the above scenario?

- a. Uncertainty and reproducibility
- b. Accuracy and reproducibility
- c. Precision and repeatability
- d. Accuracy and repeatability
- e. Precision and reproducibility

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Clear my choice

Time left 0:54:27

Question 10

Answer saved

Marked out of 1.00

Flag question

The following are DC energy meters, except _____.

- a. C. O. Bastian's meters
- b. Clock meters
- c. Induction-type meters
- d. Motor meters
- e. Intermittent registering meters

Clear my choice

Previous page

Next page

Time left 0:54:18

Question 11

Answer saved

Marked out of 1.00

Flag question

In measuring instruments, static characteristics are those that do not change quickly with time.

Select one:

- True
- False

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Next page

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Time left 0:54:09

Question 12

Answer saved

Marked out of 1.00

Flag question

The most common electronic instrumentation in use is the _____.

- a. voltmeter
- b. multitester
- c. transducer
- d. ammeter
- e. wattmeter

Clear my choice

Previous page

Next page

Time left 0:54:02

Question 13

Answer saved

Marked out of 1.00

Flag question

_____ is the retardation in the response of measurement system to change in measurement quantity.

- a. Repeatability
- b. Speed of response
- c. Delayed zone
- d. Measuring lag
- e. Dynamic error

Clear my choice

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Time left 0:52:52

Question 14

Answer saved

Marked out of 1.00

Flag question

An indicating instrument has a/an _____ which moves over a scale when an electrical quantity being measured is passed through a particular meter.

a. multimeter

b. arrow

c. pointer

d. rope

e. marker

Clear my choice

Previous page

Next page

Time left 0:50:26

Question 15

Answer saved

Marked out of 1.00

Flag question

The AC voltmeter based full wave rectifier is a circuit arrangement which makes use of one-half of ac voltage.

Select one:

- True
- False

Previous page

Next page

Time left 0:49:59

Question 16

Answer saved

Marked out of 1.00

Flag question

The current flowing through a refrigerator connected to a 120 V source is 4 A. How many watt-hours of electrical energy does the refrigerator use in 8 hours?

- a. 3.50
- b. 0.96
- c. 3500
- d. 3840
- e. 3.84

Clear my choice

Previous page

Next page

Time left 0:46:45

Question 17

Answer saved

Marked out of 1.00

Flag question

In power measurement, the power delivered is a positive quantity and power absorbed is a negative quantity.

Select one:

- True
- False

Previous page

Next page

Time left 0:46:35

Question 18

Answer saved

Marked out of 1.00

Flag question

For the measurement of voltage, the series multiplier resistance can be calculated as _____

a. R_se = R_m(V/R_m) - I_m

b. R_se = R_m

c. R_se = V-R_m

d. R_se = R_m(m-1)

e. R_se = R_m(1-m)

Clear my choice

Previous page

Next page

Time left 0:46:13

Question 19

Answer saved

Marked out of 1.00

Flag question

The multiplier and the galvanometer coil in a dc voltmeter are usually in_____.

- a. order of arrangement
- b. parallel
- c. none of the answers
- d. series
- e. series-parallel

Clear my choice

Previous page

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Next page

Time left 0:46:03

Question 20

Answer saved

Marked out of 1.00

Flag question

Median is the arithmetic average of a set of a given numbers.

Select one:

- True
- False

Previous page

Next page

Question 21

Answer saved

Marked out of 1.00

Flag question

I am an experimenter performing series of experiments in the laboratory, due to the faulty measuring instruments used and the change in temperature, I observed some errors. The two types of errors involved in this scenario are_____.

- a. Residual and Observational Errors
- b. Gross and Random Errors
- c. None of the answers
- d. Instrumental and Environmental Errors
- e. Observational and Random Errors

Clear my choice

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Time left 0:44:27

Question 22

Answer saved

Marked out of 1.00

Flag question

Given a data values of 9, 9, 8, 4, 8, 7, 10, 9, the mean, the mode and the median, are respectively.

a. 6; 9; and 6

b. 8; 9; and 8.5

c. 8; 8; and 8.5

d. 6; 8; and 6

e. 9; 9; and 8.5

Clear my choice

Time left 0:44:15

Question 23

Answer saved

Marked out of 1.00

Flag question

_____ are used in electronic communications systems to convert signals of various physical forms to electronic signals, and vice versa.

- a. Analog to digital converters
- b. Transducers
- c. Signal conditioners
- d. Multiplexers
- e. Display recorders

the answer is Transducers

Clear my choice

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Time left 0:44:00

Question 24

Answer saved

Marked out of 1.00

Flag question

The following fall under passive transducer, except _____.

- a. Resistive transducer
- b. None of the answers
- c. Inductive transducer
- d. Capacitive transducer
- e. Thermoelectric transducer

Clear my choice

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Next page

Time left 0:43:44

Question 25

Answer saved

Marked out of 1.00

Flag question

A galvanometer has a coil of resistance 100 ohm and gives a full-scale deflection for 30 mA current. If it is to work as a voltmeter of 30-volt range, the resistance required to be added will be?

- a. 900 ohm
- b. 90 ohm
- c. 150 ohm
- d. 100 ohm
- e. 1000 ohm

Clear my choice

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Time left 0:42:27

Question 26

Answer saved

Marked out of 1.00

Flag question

In a resistive transducer, an increase in area of the conductor increases the resistance of the metal conductor.

Select one:

- True
- False

Previous page

Next page

Time left 0:42:13

Question 27

Answer saved

Marked out of 1.00

Flag question

Which of the following samples is more precise?

- a. 2.01, 2.02, 2.0, 2.04, 2.045
- b. 7.5, 7.8, 7.9, 7.70, 8.0, 7.4
- c. 12.51, 12.5, 12.2, 12.53, 12.38
- d. 57.2, 58.0, 57.50, 59.0, 50
- e. 1.99, 2.0, 2.1, 2.01, 2.2, 1.89

Clear my choice

Previous page

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Next page

Time left 0:42:04

Question 28

Answer saved

Marked out of 1.00

Flag question

The following are advantages of electronic instruments and measurements, except?

- a. They can be amplified
- b. Have high power consumption
- c. They possess high sensitivity
- d. They possess greater flexibility
- e. They facilitate the building of analog and digital signals

Clear my choice

Previous page

Next page

Time left 0:41:58

Question 29

Answer saved

Marked out of 1.00

Flag question

In shunt ohmmeter, the component to be measured can be connected with the meter in series.

Select one:

- True
- False

Previous page

Next page

Compiled by Warrior - Uhall

Time left 0:41:51

Question 30

Answer saved

Marked out of 1.00

Flag question

In terms of power measurement in DC circuits, there exists a phase difference between voltage and current and also their instantaneous values change from time to time.

Select one:

- True
- False

Previous page

Next page

Time left 0:41:42

Question 31

Answer saved

Marked out of 1.00

Flag question

A true length of a steel beam is 6m. The repeated measured or instrument reading with a laser meter indicates a length of 6.015m. What is the absolute accuracy??

- a. 0.0025
- b. 1.0025
- c. 0.015
- d. 0.99
- e. 0.025

Clear my choice

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Time left 0:41:32

Question 32

Answer saved

Marked out of 1.00

Flag question

When temperature is changed from 0 °C to 50 °C, the resistance in a thermometer changes from 100 ohms to 119.4 ohms. Compute the sensitivity for the range.

a. 26

b. 0.26

c. 0.39

d. 0.50

e. 2.6

Clear my choice

Previous page

Next page

Time left 0:41:08

Question 33

Answer saved

Marked out of 1.00

Flag question

Relative error is defined as the ratio of absolute error to the true value of the quantity under measurement.

Select one:

- True
- False

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Next page

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Time left 0:40:14

Question 34

Answer saved

Marked out of 1.00

Flag question

The passive transducer does not require an external power source for its operation

Select one:

- True
- False

Previous page

Next page

Time left 0:40:02

Question 35

Answer saved

Marked out of 1.00

Flag question

In a series circuit, the components experience the same potential energy difference.

Select one:

- True
- False

Previous page

Next page

Time left 0:39:50

Question 36

Answer saved

Marked out of 1.00

Flag question

An Electrolytic meter is essentially_____

a. a true watt-hour meter

b. a multimeter

c. either watt-hour or ampere-hour meters

d. an ampere-hour meter

e. neither watt-hour nor ampere-hour meter

Clear my choice

Previous page

Next page

Time left 0:38:33

Question 37

Answer saved

Marked out of 1.00

Flag question

A passive transducer is said to be an inductive transducer when it produces the change in capacitive value.

Select one:

- True
- False

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Next page

Time left 0:38:25

Question 38

Answer saved

Marked out of 1.00

Flag question

In using a carbon dioxide meter, the continuous detection of carbon dioxide concentration can be performed by connecting the meter to a/an _____.

a. control system

b. mobile meter

c. LabVIEW software

d. mini data-logger

e. pitot tube

Clear my choice

Previous page

Next page

Time left 0:38:19

Question 39

Answer saved

Marked out of 1.00

Flag question

Assuming the true length of a rope is exactly 50 meters, and after taking measurement of the rope you obtain 50.50 meters. Your measurement is accurate.

Select one:

- True
- False

Previous page

Next page

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Time left 0:35:53

Question 40

Answer saved

Marked out of 1.00

Flag question

Observational error and Gross error are analogous.

Select one:

- True
- False

Previous page

Next page

Time left 0:33:33

Question 41

Answer saved

Marked out of 1.00

Flag question

In measurement, if you are consistently accurate, you are also precise. However, if you are precise, that doesn't mean you are accurate.

Select one:

- True
- False

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Next page

Time left 0:31:20

Question 42

Answer saved

Marked out of 1.00

Flag question

A DC voltmeter can be used to measure AC voltages on condition that _____.

- a. a wattmeter is used in place of an ammeter and a voltmeter
- b. an ac induction meter is used to convert the AC into DC
- c. a transducer is used to convert the AC into DC
- d. a rectifier is used to convert the AC into DC
- e. a multiplier is connected in series with the voltmeter

Clear my choice

Previous page

Next page

Time left 0:31:06

Question 43

Answer saved

Marked out of 1.00

Flag question

A passive transducer is labelled as a piezo electric transducer, when its electrical output is equivalent to its pressure input.

Select one:

- True
- False

Previous page

Next page

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Time left 0:30:03

Question 44

Answer saved

Marked out of 1.00

Flag question

The difference between the true value of a quantity without a change in time and the instrument reading or measured value is termed as _____.

a. accuracy

b. precision error

c. static error

d. dynamic error

e. percentage of static error

Clear my choice

Previous page

Next page

Time left 0:29:55

Question 45

Answer saved

Marked out of 1.00

Flag question

Consider a pressure sensor that has a measurement range of 0 - 150 PSI and an output range of 0 - 10 V. Calculate its inverse sensitivity?

- a. 0.06667
- b. 10
- c. 0.05
- d. 15
- e. 0.667

Clear my choice

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Time left 0:29:44

Question 46

Answer saved

Marked out of 1.00

Flag question

The AC voltage across a resistance can be measured using a_____.

- a. moving magnetic galvanometer
- b. potentiometer
- c. resistive voltmeter
- d. moving coil galvanometer
- e. hot-wire voltmeter

Clear my choice

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Next page

Time left 0:29:37

Question 47

Answer saved

Marked out of 1.00

Flag question

_____measurement is a function of gravity and the liquid's density.

- a. Volumetric
- b. Density
- c. Gravitational
- d. Manometric
- e. Ammeter

Clear my choice

Previous page

Next page

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Time left 0:29:17

Question 48

Answer saved

Marked out of 1.00

Flag question

A moving-coil permanent-magnet instrument can be used as a/an _____by using a low resistance shunt.

- a. ammeter The answer is ammeter
- b. voltmeter
- c. ballistic galvanometer
- d. flux-meter

Clear my choice

Previous page

Next page

Time left 0:28:58

Question 49

Answer saved

Marked out of 1.00

Flag question

The device used to indicate the power factor of a circuit directly instead of obtaining the watts applied to a circuit and dividing by the volt amperes in the circuit is termed as _____.

- a. Bolometer
- b. Power meter
- c. Power factor meter The answer is power factor meter
- d. Indicating instruments
- e. Wattmeter

Clear my choice

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Time left 0:28:47

Question 50

Answer saved

Marked out of 1.00

Flag question

With regards to power measurement, for power to be conserved in any close loop, the total power absorbed must be greater than the total power delivered.

Select one:

- True
- False

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Next page

Time left 0:28:32

Question 51

Answer saved

Marked out of 1.00

Flag question

The measurement of microwave power around 10 W and 50 kW can be understood as the measurement of high power. In terms of high-power measurement, the _____is the most accurate of all instruments.

- a. Hot Electron Bolometer
- b. Calorimeter
- c. Electron Wattmer
- d. Electrolytic Meter
- e. Microbolometer

Clear my choice

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Time left 0:26:45

Question 52

Answer saved

Marked out of 1.00

Flag question

In recent times, manometers have been widely used for energy auditing due to their intrinsic simplicity of operation and accuracy.

Select one:

- True
- False

Previous page

Next page

Question 53

Answer saved

Marked out of 1.00

Flag question

Time left 0:26:34

Which of the following is/are not correct in terms of static and dynamic characteristics?

i. Fidelity - *static*

ii. Speed of response - *dynamic*

iii. Repeatability - *dynamic*

iv. Measuring lag - *static*

v. Precision - *static*

vi. Hysteresis - *dynamic*

vii. Dead zone – *static*

a. iv, v and vii

b. i, iii and vi

c. i, ii and iii

d. ii, iii and vi

e. i, iv and vii

Bonus Question

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Clear my choice

Time left 0:26:25

Question 54

Answer saved

Marked out of 1.00

Flag question

The inductive transducer is based on the following parameters except _____.

a. the number of turns of coil

b. the permeability of core

c. the reluctance of coil

d. the resistance of coil

Clear my choice

Previous page

Next page

Time left 0:25:04

Question 56

Answer saved

Marked out of 1.00

Flag question

Which of the following falls under desirable characteristics?

- a. Measuring Lag
- b. Hysteresis
- c. Dead Zone
- d. Repeatability
- e. Static Error

Clear my choice

Previous page

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Next page

Time left 0:24:28

Question 57

Answer saved

Marked out of 1.00

Flag question

The performance characteristics of a measuring instrument are judged based on how faithfully the system measures the desired input and how thoroughly it rejects the undesirable inputs.

Select one:

- True
- False

Previous page

Next page

Time left 0:24:20

Question 58

Answer saved

Marked out of 1.00

Flag question

A true length of a steel beam is 6m. The instrument reading with a laser meter indicates a length of 6.015m. What is the percentage of the static error?

- a. -0.25 %
- b. 0.05 %
- c. -0.05 %
- d. 90 %
- e. -0.003 %

Clear my choice

Compiled by Warrior - Uhall

Time left 0:24:10

Question 59

Answer saved

Marked out of 1.00

Flag question

The principle of operation of the hot-wire anemometer is based on the _____.

- a. volumetric flow rate
- b. relationship between the resistance of the wire and the speed of flow
- c. relationship between the flow area and the output power
- d. relationship between the current flow and the flow speed
- e. air flow

Clear my choice

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ELECTRONICS AND INSTRUMENTATION

Time left 0:24:02

Question 60

Answer saved

Marked out of 1.00

Flag question

A (0-100)A ammeter can be used for measuring the AC current between 80 and 100 amperes.

Select one:

- True
- False

Previous page

Finish attempt ...

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