

4th elect

Department of technology

Grade: fourth year

Specialty: electrical engineering

Module: English

text

An instrument is a device in which we can determine the magnitude or value of the quantity to be measured. The measuring quantity can be voltage, current, power and energy. One Watt is a small amount of power. Some devices require only a few Watts to operate, and other devices require larger amounts. The power consumption of small devices is usually measured in Watts, and the power consumption of larger devices is measured in kilowatts (kW), or 1,000 Watts. Electricity generation capacity is often measured in multiples of kilowatts, such as megawatts (MW) and giga watts (GW). One MW is 1,000 kW (or 1,000,000 Watts), and one GW is 1,000 MW (or 1,000,000,000 Watts).

A Watt hour (Wh) is equal to the energy of one Watt steadily supplied to, or taken from, an electric circuit for one hour. The amount of electricity that a power plant generates or an electric utility customer uses is typically measured in kilo watt hours (kWh). One kWh is one kilowatt generated or consumed for one hour. For example, if you use a 40-Watt (0.04 kW) light bulb for five hours, you have used 200 Wh, or 0.2 kWh, of electrical energy.

Electric utilities measure the electricity consumption of their customers with meters that are usually located on the outside of the customer's property where the power line enters the property. In the past, all electricity meters were mechanical devices that a utility employee had to read manually. Eventually, automated reader devices became available. These meters periodically report electricity use to utilities from mechanical meters with an electronic signal. Now, many utilities use electronic *smart meters*, which provide wireless access to the meter's power usage data, to measure electricity consumption in real-time. Some smart meters can even measure the electricity use of individual devices and allow the utility or customer to control electricity use remotely.

Questions:

Part one:

1/ say whether the following sentences are true or false, justify each sentence from the text whether true or false: (4pts)

- a/ a watt hour meter conveys you the quite measurement of the current during one hour.
- b/ smart meters authorize the customer or utility to control electricity use remotely.
- c/ certain devices impose larger amounts of power to put into work.
- d/ in the time being, the read of devices were manually.

2/ answer the following questions from the text: (3pts)

- a/ are all devices require minimum watts to operate? Justify.
- b/ are electronic smart meters more functional than the old electricity meters?
- c/ how do we measure the power consumption of sizeable devices?

Part two:

1/ match the following tools with their functions: (2pts)

- | | |
|--------------------|---|
| a/ fish tape | 1/ is used for the cutting of wires. |
| b/ electrical tape | 2/ is used for temporary wiring installations. |
| c/ pliers | 3/ is used to route new wiring through walls and electrical conductor. |
| d/ flat cord | 4/ is used to tie two wires or to provide insulators for the conductor. |

2/ cross the odd word: (1pt)

- a/ conductor: copper- glass- steel- aluminum.
b/ insulator: plastic- rubber- gold- glass.

3/ translate the following words in English? (2pts)

- 1/ التيار المتناوب /2 التحليل الرقمي /3 شريط القياس /4 التيار المباشر
4/ choose the right answer: (2pts)

1/ materials used to strengthen magnetic field:

- a/ irons, silicon steel b/ plastic , iron c/ silicon steel, glass
2/ voltmeter measures the potential difference between
a/ two points in a circuit b/ units of measurement c/ between one point in a circuit

Part three:

1/ Fill in the blanks with the following words: (6pts) (choose one of these to answer fill in the blanks or the paragraph)

Electronics- currents- application- devices- high- conversion

Power is the branch of electrical engineering that deals with the processing of voltages and to deliver power that supports a variety of needs. It deals with the of power semiconductor for the control and of electrical power.

Signal- measurements- systems- wave- signals- currents

..... processing is an electrical engineering subfield that focuses on analysing, modifying, and synthesizing such as sound, images, and scientific It is an electrical impulse or a that carries information. This refers to the changing or voltages, or electromagnetic waves that transmit data at any point in electrical

2/ based on your knowledge write a short paragraph talking about the four main types of electrical measurements (volts- amps- ohms- watts)/ (what are they and their different functions) (6pts)

Best of luck

Correction of the first English exam

(4 year electrical engineering)

Part one:

1/ true or false with justifying each sentence whether true or false from the text (4pts)

A→ true→ a watt hour is equal to the energy of one watt steadily supplied to, or taken from, an electric circuit for one hour

B→ true →some smart meters allow the utility or customer to control electricity use remotely.

C→ true→ other devices require larger amounts to operate

D→ false→ in the past, the read of devices were manually

2/ answering the questions from the text (3pts)

a/ no, justification: some devices require only few watts to operate, and other devices require larger amounts.

b/ yes, they are.

c/ sizeable devices are measured in kilowatts.

Part two:

1/ matching tools with their functions (2pts)

a→3

b→4

c→1

d→2

2/ crossing the odd word (1pts)

A→ glass

b→ gold

3/ the translation of words in English (2pts)

1/alternating current→التيار المتناوب

2/digital analysis→التحليل الرقمي

3/electrical tape→شريط القياس

4/direct current→التيار المباشر

4/ choosing the correct answer (2pts)

1→ irons, silicon steel

2→ two points in a circuit

Part three:

Choose one of these to answer:

1/ fill in the blanks (6pts)

First paragraph→ electronics- high- currents- application- devices- conversion

Second paragraph→ signal- signals- measurements- wave- currents- systems

2/write a paragraph talking about the four 4 main types of electrical measurements (volts-amps- ohms- watts)/
(their definition and their different functions) (6pts)