

## Measurement of electric quantities

Total Questions: 7

Most Correct Answers: #2

Least Correct Answers: #7

## 1. What are desirable properties of current meters?

- 24/37  A Inner resistance = 0
- 2/37  B Inner resistance = inf
- 2/37  C It depends on the task.

## 2. What are desirable properties of voltage meters?

- 2/37  A Inner resistance = 0
- 27/37  B Inner resistance = inf
- 3/37  C It depends on the task.

## 3. What properties does an idealized operational amplifier have?

- 6/37  A Input resistance = 0
- 21/37  B Input resistance = inf
- 3/37  C Output resistance = inf
- 21/37  D Output resistance = 0
- 5/37  E Gain = 0

## 4. Apparent power...

- 3/37  A ...can also be called 'active power'.
- 4/37  B ...can also be called 'reactive power'.
- 19/37  C ...equals the active power for purely ohmic reactances.
- 2/37  D ...contains only active power.
- 23/37  E ...is the product between RMS values of voltage and current.

## 5. The root mean square (RMS) value of an AC quantity...

- 12/37  A ... depends on the shape of the signal.
- 16/37  B ... equals the absolute value of the amplitude divided by the square root of 2.
- 20/37  C ... is always smaller than the absolute value of the amplitude.

## 6. Frequency-dependent components.

- 22/37  A For AC quantities with high frequencies a capacitor behaves like a short-cut.
- 19/37  B For AC quantities with low frequencies a coil behaves like a short-cut.
- 20/37  C Operational amplifier (OpAmp) circuits without coils and capacitors are frequency independent.

## 7. For a bridge circuit consisting of 3 fixed and 1 measurement resistor...

- 15/37  A ...the diagonal voltage ( $U_d$ ) depends in a nonlinear way on the measurement resistor.
- 28/37  B ...the diagonal voltage ( $U_d$ ) equals zero, if the bridge is balanced.
- 18/37  C ...the sensitivity is smaller than the sensitivity of a half or full bridge.