

**1. Choose the correct options:** Sensors consist of

- ☐ Sensor transmitter
- ☐ HMI
- ☐ Measuring circuit and amplifier
- ☐ DCS
- ☐ Signal processing circuits
- ☐ Analogue to digital converter
- ☐ Communication circuit

**2. Assign the terms from the left column to the corresponding ones on the right!**

Hydrostatic pressure  
gauges

Bourdon-tube, membrane, corrugated  
box-type

Force pressure gauges

Potentiometer, induction, optical

Capacity, tensometric

Resonating

Piezoelectric

Deformation pressure  
gauges

U-pipe

Container

Micromanometer with a inclinable arm

Compression vacuumeters

Pressure sensors with  
electric output  
(electromechanical  
pressure gauges)

Bell, piston



**3. Complete the sentence!**

$\left( \begin{array}{c} \text{Pitot Tubes} \\ \text{Section Gauges} \\ \text{Paddle Wheel Flow Meters} \\ \text{Piston Flow Meters} \end{array} \right)$  are the most accurate sensors used for flow metering.

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**4. Choose the correct option:** Programming according to IEC/EN 61131-3 can use the following types:

- ☐ IRL (Independent Relay Language)
  - ☐ LD (Ladder Diagram)
  - ☐ PL (Pascal language)
  - ☐ ST (Structured Text language)
  - ☐ IL (Instruction List language)
  - ☐ FBD (Function Block Diagram language)
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**5. Fill the correct elements in the corresponding blocks!**

Frequency Converters are used for

smooth starting asynchronous motors

Softstarters are used for

smooth control of asynchronous motors

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**6. Complete the sentences!**

Control is \_\_\_\_\_.

SCADA (Supervisory Control And Data Acquisition) enables \_\_\_\_\_.

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**7. Explain the main types of systems**

Hybrid systems – \_\_\_\_\_.

Logical (binary) systems – \_\_\_\_\_.

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**8. Choose the correct option!**

\_\_\_\_\_ – is the main characteristic of synchronous motor

- a) Equality of rotor speed with magnetic stator field
- b) Mutual electromagnetic influence of rotating magnetic field of rotors and stators
- c) Non-equality of rotor speed with magnetic stator field

\_\_\_\_\_ – are suited especially for high-force applications

- a) Asynchronous Motors
  - b) Hydraulic actuators
  - c) Pneumatic actuators
- 

**9. Complete the sentence!**

Ultrasonic Flow Meters use  $\left( \begin{array}{c} \text{semiconductor effect} \\ \text{Doppler effect} \\ \text{Aharonov - Bohm effect} \\ \text{Gibbons–Hawking effect} \end{array} \right)$  as the main principle for measurement.

