

Tutorial 10

ET0917 / ET0817 / ET0832

**Introduction to
Modern SCADA, OPC UA and Digital Twin**

Q1 - MCQ

Which is NOT the functions of a SCADA system?

- a) Collect field information
- b) Transfer information to central computer facility
- c) Real time control of field actuators such as valves and motors
- d) Monitoring of operations from central location

Q2 - MCQ

Which is NOT a key component directly linked to SCADA

- a) Remote Terminal Unit RTU
- b) Analog sensor with 4-20mA output
- c) Human Machine Interface (HMI)
- d) Data Historian

Q3 - MCQ

Which statement best describes a SCADA system?

- a) It's a supervisory software that gathers data and provide central control to PLC
- b) it's a controller that has networking capabilities to communicate with sensors and actuators in the field
- c) it's a supervisory hardware that supervisor use at field to provide control to PLC and often do not have data storage capability
- d) it's an advanced version of PLC with i4.0 capabilities

Q4 - MCQ

OPC UA stands for _____

- a) Open Platform Communication Unified Architecture
- b) Open Platform Communication Universal Architecture
- c) Open Peripheral Cooperative Unified Architecture
- d) Open Peripheral Cooperative Universal Architecture

Q5 - MCQ

What is FALSE about OPC UA?

- a) It is a data exchange standard for industrial communication
- b) It is an open interface standard independent of manufacturer
- c) It is Secure-by-default, encryption enabled, and uses advanced certificate handling
- d) It is specifically designed to work on PLC and Windows operating system only

Q6 - MCQ

Which is FALSE about the uses of OPC UA?

- a) Interface Client and Server
- b) Interface Server to Server
- c) Interface discrete sensor to PLC
- d) Monitoring of alarms and events

Q7 - MCQ

Which statement is NOT true about the Digital Twin?

- a) Sensor signals from the Digital Twin can replace real sensors, thereby saving cost for manufacturers
- b) It is a virtual copy of a physical machine
- c) It behaves like the physical machine
- d) It may be controlled by a PLC program written for a physical machine

Q8 - MCQ

Which is NOT a CAD software feature required for Digital Twin?

- a) Ability to model the operation of the machine
- b) 2-D drafting
- c) Ability to include data, kinematic and dynamic properties of components
- d) Physics-based interactive simulation